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ABSTRACT

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Abstract

Business model innovation has long been highlighted as a mean for companies to improve their performance. However, the challenges that incumbent organizations face and how to overcome them, when trying to innovate new business models or change their current one has not received much attention, yet. While smaller and entrepreneurial companies largely benefit from engaging in business model innovation processes, incumbents seem to fall behind in the utilization of such. Path dependencies, the dominant logic of the firm and the interdisciplinary nature of business model innovation are therefore discussed to set a literature frame for business model innovation within incumbents. This thesis proposes to utilize the concept of shared cognition in incumbent firms to be able to overcome the challenges introduced.

Executing an in-depth case study with an incumbent case company, attempting to implement an organization-wide business model innovation process offered the researcher insights on the challenges and possible solutions of implementing a business model innovation process within an incumbent firm. Based on the case company results, business model innovation processes in incumbent firms experience a different set of challenges, as opposed to small and medium sized companies or newly found businesses. Internal competition, communication, business model clashes and a disconnection between operational levels and strategical levels of the incumbent are thereby identified.

Finally, this thesis explicates the link between organizational strategy formulation and business model innovation, suggesting a process model, specifying the linkage points between the two concepts. Conclusively it is argued, that reaching shared cognition is a precondition as well as part of the solution, specifically in the context of incumbents. Creating this connection offers great potential for improvement. Thereby, this thesis offers possible suggestions for recent calls for linking BMI to organizational strategy as well as addressing the need to explicate the challenges of incumbents engaging in business model innovation and how they might be overcome.

Key words	Business model innovation, shared cognition, organizational strategy, incumbents
Further information	

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REACHING SHARED COGNITION IN BUSINESS MODEL INNOVATION PROCESSES

Overcoming the challenges of an incumbent firm

Master´s Thesis
in International Business

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Table of contents

List of figures

List of tables

1 INTRODUCTION

In today's changing business environments incumbent firms are challenged to diversify their offerings (Sachsenhöfer 2016, 40), face strategic discontinuities (Doz & Kosonen 2010, 370), disruption (Voelpel et al 2004, 264) and answer to intensifying & dynamic competition (Johnson et al. 2008) all of the above demand a reaction from the established players, if they wish to compete in the long run. No longer are offerings just about reaching the lowest price or the best quality of the product, but the way one can achieve a competitive advantage has become manifold. (Sachsenhöfer 2016, 40) Conclusively, attention turns towards business model innovation, promising the change necessary to answer to the above mentioned challenges (Voelpel et al 2004, 264; Johnson et al. 2008; Doz & Kosonen 2010, 370; El Sawy et al. 2010; Hult 2012; Schneider & Spieth 2013, 2; Ahokangas & Myllykoski 2014, 10; Taran, Boer & Lindgren 2015, 301; Sachsenhöfer 2016, 40; Remane et al. 2017, 6). Engaging in business model innovation is said to provide a company with competitive advantages, through the discovery and exploitation of new business opportunities (Ahokangas & Myllykoski 2014, 10), increased innovative output (Voelpel et al 2004, 264) and improved financial performance (Foss & Saebi 2017, 212). Especially in the light of changing demands towards company's offerings, and the increasing complexity of value creation, business model innovation is seen to be promising to respond (El Sawy et al. 2010; Schneider & Spieth 2013, 2; Euchner & Ganguly 2014, 33-34; Remane et al. 2017, 6). Even though business model innovation is often seen as a concept to develop a new organisation around an offering (Foss & Saebi 2017, 214), the importance for established companies to engage in the renewal of their business model (BM), or the development of new business models, within the same organisation, seems to be just as important for their long-term success and survival as it is for newly found businesses. Therefore, business model innovation within incumbent firms should receive an increasing interest by academia and practice (Sachsenhöfer 2016, 40; Daspit 2017, 785). In fact, incumbent firms should be especially interested in how to achieve business model innovations as, even a currently successful business model does not seem to guarantee permanent successful performance in the long-term (Chesbrough 2007, Desyllas & Sako 2013; Spieth, Schneckenberg & Matzler 2016, 403-404).

However, despite growing attention for the concept of business model innovation, the concept currently lacks construct clarity. (Casadesus-Masanell & Zhu 2013, 480; Spieth, Schneckenberg & Ricart 2014, 238; Foss & Saebi 2017, 203) Generally, the focus of innovation lies more with the products, based on the assumption that patents and legal institutions can protect them. However, when considering business model innovation this assumption becomes obsolete, as value creation from such business model innovations is made up of tangible as well as intangible resources, explaining the increasing interest in the concept (Teece 2010, 175; Bucherer et al. 2012; Hossain 2016, 342). While most of

the research agrees what a business model is, providing component models like the "Business model canvas" (Osterwalder & Pigneur 2010) and that BMI is largely dependent on experimentation of new opportunities, providing process models on how to achieve BMI (Euchner & Ganguly, 34-38), barriers are not far. The problematic co-existence of business models at the same time within the same organisation (Chesbrough 2010, 357 – 359), cognitive barriers decreasing the likelihood of identifying new business model innovation opportunities (Bettis & Prahalad 1995) and the fear of individuals that new business models will make current ones obsolete, amongst others, are often discussed (Christensen 1995; Hossain 2016, 348). Especially, in the setting of incumbent firms the complexity of BMI processes is increased with the more intertwined system an existing company usually has. The more complex it is, the more difficult it becomes to change it, requiring adjustment of many components at once (Newell, Shaw & Simon 1962; Foss & Saebi 2017, 216). Considering that innovative initiatives are uncertain in their return on investment and still are rather expensive to engage in, especially established companies and their inherent complexity of achieving business model innovation, seem to be rather avoidant to engage in business model innovation (Amit & Zott 2012; Remane et al. 2017, 2). Despite the anticipated and often highlighted difficulties, established companies might face, Berends et al.'s article (2016, 199) argues that incumbent firms can show business model innovation capabilities, outperforming smaller companies.

It is argued that business model innovation processes require a different approach than traditional innovation processes (Spieth, Schneckenberger & Matzler 2016, 409). Especially, in the setting of incumbent firms, business model innovation processes require a different support than traditional R&D projects. Therefore, does the differences between BMI-processes in new ventures and established firms require more investigation, shedding light on the barriers that BMI processes face and how they might be overcome (Sosna, Trevyno-Rodriguez & Velamuri 2010, 402). So far, research on business model innovation did focus mainly on young companies and less on older, incumbent firms. Small and medium enterprises as well as newly found businesses usually show the required flexibility to successfully engage in BMI-processes whereas incumbent firms show higher difficulty in implementing them (Foss & Saebi 2017, 214). The question on how to reach BMI within established companies is largely neglected in the literature (Amit & Zott 2001; Morris et al. 2005; Lindgren, Taran & Boer 2010; Osterwalder & Pigneur 2010; Taran, Boer & Lindgren 2015, 304). Therefore, it is important to further investigate how organizational processes should be designed to incorporate business model innovation in this setting (Spieth, Schneckenberger & Matzler 2016, 410; Baden-Fuller & Haefliger 2013; Hossain 2016, 346). Even though there is much research available, that covers different elements of the BMI process, suggestions for the incorporation of them into one unified process suitable for an organizational context remain scarce (Euchner & Ganguly 2014, 38-39). The contextual impact on business model innovation, generally has

rarely been discussed in the literature, hence calling for further investigation how certain contexts influence the process and what adjustments should be considered to include these requirements (Ahokangas & Myllykoski 2014, 10).

As this thesis is taking a process perspective on business model innovation within an established company, not only the role of individuals is important to clarify, but the interesting research opportunity is how teams and the organization as a whole might be included in the process (Spieth, Schneckenberger & Matzler 2016, 409). The question on how to organize individual-level, firm-level and inter-firm level interaction of actors in the process of business model innovation (Spieth, Schneckenberger & Matzler 2016, 409) and how knowledge of such projects transfers through organizational levels (Sosna, Trevyno-Rodriguez & Matzler 2010, 402) is still open to be answered. As business model innovation projects within incumbent firms are dependent on receiving support from their organization, the question of how legitimacy is created and resources acquired goes hand in hand (Spieth, Schneckenberger & Matzler 2016, 410). Conclusively, the role of people, social processes and structure in business model innovation, should receive more attention, to answer on how new business model projects can establish legitimacy and receive support from their organization (Spieth, Schneckenberger & Matzler 2016, 409). How do the different actors interact with each other and which interactions are specifically important and possibly should be incorporated into organizational structures? Therefore, this thesis proposes the concept of shared cognition as an important factor for the process of BMI within incumbent organizations, following the suggestion of Huber & Lewis' article (2010, 22), Daspit's article (2017, 789) and others who are arguing in favour of the importance of cognition for the process of BMI.

The construct of business model innovation seems to develop as an interdisciplinary phenomenon, incorporating several other research streams (Daspit 2017, 787). Specifically, following the research opportunity suggested by Spieth, Schneckenberger and Matzler's article (2016, 409) this thesis investigates the interplay of strategy and business model innovation. How these two fit together, whether they are interconnected or not in order to achieve business model innovation is open for debate. How the process of BMI relates to reframing a dominant logic and possibly counteracting not-invented-here syndrome will be part of this discussion (Spieth, Schneckenberger & Matzler 2016, 410). It is unclear how an incumbent firm should restructure its internal resources, how it could deal with internal conflicts for resource allocation from existing to new business models as well as the development of a second business model under a currently running one, without forming two separate organizations (Spieth, Schneckenberger & Matzler 2016, 410; Markides 2013, 320) Ultimately, it is argued that reaching a state of shared cognition throughout company levels while engaging in BMI processes is necessary for incumbent firms to successfully reach business model innovations, requiring a rethinking of current

organizational assumptions, the current business logic and company strategy. Establishing this link is subject of this thesis.

The main research question of this thesis tries to answer on *how an incumbent firm's strategy should be linked to the process of business model innovation in their setting?* Three sub-questions have further been identified to be able to offer an appropriate answer on this matter: *(a) what challenges does business model innovation face in the context of an incumbent firm?*, *(b) how might business model innovation processes be modified to meet incumbent firm requirements?* and finally *(c) how could business model innovation processes reach shared cognition throughout the incumbent firm for business model innovation success?*

The first sub-question attempts to identify the special context that incumbent firms offer and how it affects the process of business model innovation. Some research is available on the challenges of BMI in the context of business model innovation, naming company inertia, internal resistance to change and internal competition. Hence, it is investigated within the case company what challenges are occurring within the case company. The second question will try to discuss possible adjustments to the process of business model innovation that fit the challenges identified throughout answering sub-question one. The current picture of business model innovation processes, as being trial-and-error based, showing a continuous design and include experimentation are mainly investigated in different contexts than an incumbent firm, making it important to look at, whether or not the case company is able to implement such a process and identify the beneficial and hostile factors for the implementation. The final sub-question is taking a specific look at the case company's strategy and how business strategy might be linked to the BMI process and why.

This thesis begins with the investigation of previous literature on the topics of business model innovation, business model innovation process specifically in the context of incumbent firms and the building of shared cognition and business strategy (Chapter 2). Chapter 3 will present the methodological approach this thesis takes to investigate the phenomenon introduced, as well as how data is collected and analysed. An action research approach has been chosen that allowed the researcher to participate in-person in the business model innovation process of the case company as well as to conduct interviews with key employees, important to the process. Chapter 4 will present the results drawn from the collected data and will present findings and contributions to the topic of business model innovation within incumbent firms. Chapter 5 will draw a conclusion to the investigation and will discuss links between the theoretical background and the results of this research, providing suggestions for future research as well as identifying gaps in this research that have not been covered, yet. Managerial and practical implications drawn from the results will attempt to support practitioners to improve their business model innovation process, are covered during this chapter as well.

2 LITERATURE REVIEW

2.1 Business model innovation

2.1.1 Research streams

Research on the concept of business model innovation research is focusing on three major themes, “prerequisites”, “process” and “effects”. (Schneider & Spieth 2013, 5-15 & 134; Spieth, Schneckenberg & Ricart 2014, 238; Foss & Saebi 2017, 204). The research streams on the effects of BMI can be described as threefold. First the effects of BMI on industries and market structures is investigated, second the effects of BMI on individuals and firms and finally the effect on firm’s capability development is covered (Schneider & Spieth 2013, 14). The business model innovation research focuses on the application of business models and related themes. The ”process”-theme on the other hand characterises the process and its contents of business model innovation. Topics like trial-and-error learning, continuous process design and the evolutionary nature of the BMI process. Finally, the prerequisites of BMI discuss the capabilities an organization should have in order to be able to successfully execute business model innovation. Concepts like strategic agility, leadership unity and resource fluidity are mentioned in this research stream. (Schneider & Spieth 2013, 5-15) However, others are separating the streams even further, listing 7 macro themes of BMI. BMI Definitions, BMI drivers, BMI outcomes, BMI barriers, BMI enablers, BMI tools and BMI processes (Daspit 2017). Whereas others only use process and outcome (Taran, Boer & Lindgren 2015, 304).

For this thesis, the separation between prerequisites, process and effects is followed. In the setting of an incumbent, the context has a big influence on the successful outcome of the BMI process. Therefore, looking into the prerequisites of an incumbent context is tremendously important to specify how the process should be designed and how the prerequisites of an incumbent need to be modified to incorporate a functioning BMI process. Only then, the effects can be observed and attributed to their source, thereby explaining why the separation of prerequisites, process and effects is most suitable for this thesis and has been consequently chosen. Specifically, focusing on the streams of prerequisites and process. Explicating the transformational dimension of the business model concept, the business model innovation stream on processes provides answers, concerning the evolution of business models over time, and offers ways of managing and organizing such a process.

However, the term of business model innovation has been misinterpreted and misused over the years by practitioners and scholars alike (DaSilva & Trkman 2014; Hossain

2016, 344). Hence, it is important to clarify further what business model innovation processes are, what they include and how they can be implemented in different contexts. As mentioned previously, this thesis takes the point of view that business models are a transformational phenomenon that needs to be managed in order to achieve innovative outcomes. Nonetheless arguing that business model innovation might be one of the biggest challenges for today's managers (Remane et al. 2017, 6). However, if properly managed and handled, business model innovation can be a key driver for company success (Schneider & Spieth 2013; Täuscher & Abdelkafi 2017, 162) enhancing strategic flexibility (Bock, Opsahl, George & Gann 2012), responding to high environmental volatility (Zott & Amit 2010), improving sustainable performance (Pedersen, Gwozdz & Hvass 2016), organizational resilience (Carayannis, Grigoroudis, Sindakis & Walter 2014; Carayannis, Sinakis & Walter 2015), competitive advantage (Chesbrough 2010; McGrath 2010), and improve financial performance (Chesbrough & Rosenbloom 2002; Aspara, Hietanen & Tikkanen 2010; Täuscher & Abdelkafi 2017) Furthermore, business model innovation is the process of commercializing a new idea or technology, following the motto that a mediocre technology pursued with a great business model may be more valuable than a great technology exploited via a mediocre business model (Chesbrough 2010, 354). Evidently showing the importance for a company to be able to implement and manage business model innovation processes and developing the prerequisites to perform them.

Having generally established what streams current research is focusing on, the next chapter will take a closer look on the definition of the business model innovation concept. As the concept is often misused and misinterpreted (DaSilva & Trkman 2014; Hossain 2016, 344), clarifying what business model innovation entails is vital for this thesis.

2.1.2 Concept definition

First, the question of what a business model innovation is, needs to be answered. When is an innovation or change considered a business model innovation? Generally, a business model innovation appears when a company modifies or improves one or several business model elements (Abdelkafi et al. 2013, 13; Remane et al. 2017, 5), when a firm adopts a novel approach to commercializing its underlying assets (Gambardella & McGahan 2010, 312) or when a novel value proposition/value constellation combination is found (Yunus et al. 2010, 312). There are many different definitions of business model innovation available, however, the definition that business model innovations are designed, novel, and nontrivial changes to the key elements of a firm's business model and/or the architecture linking these elements is followed during this thesis (Foss & Saebi 2017, 216). The choice of this definition is justified as BMI being designed, implies the purposeful intention of change, indicating the existence of a possible process to reach an intended result, second

the attribute of being novel demands the novelty of the change to the company and/or industry. Many changes in an incumbent firm are changes that can be attributed to the existing offering of the company and are necessary steps to improve their performance. BMI on the other hand is the creation of a new offering, possibly utilizing pre-existing components of the organization but nonetheless new. Finally, nontriviality supports the previous argument, choosing the safe way of changing one component at a time might be the least risky option for an incumbent to innovate, however this is not the aspiration of BMI, which attempts to create a new offering based on several changes of business model components, creating a new system to create, deliver and capture value. A business model can be innovated by redefining the content (adding new activities), structure (linking activities differently), and governance (changing parties that do the activities) (Sorescu et al. 2011, S7; Amit & Zott 2012). Achieved through reactivation, repartitioning, relocation or relinking of business model components (Santos et al. 2009; Sorescu et al. 2011, p. S7) to create and capture value (Hossain 2016, 348). Where value creation is the identification of values and their connections (McGrath 2010; Hossain 2016, 348) and value capture is the delivery and monetization of value (Teece 2010; Hossain 2016, 348). It is important to consider Value proposition, value delivery and value capture equally. And answers on "Who are the customers and what value can the firm provide", "How is the value delivered?" and "How is value captured?" all need to be answered (Yunus et al. 2010; Hossain 2016, 344), relating to the previously given definition of business models, being the creation, delivery and capture of value. In this respect, business model innovation needs to show a certain strategy or vision for organizing a firm in order to create value and second what set of capabilities it needs to be able to provide named value (Johnson, Christensen & Kagermann 2008, 52-53; Evans & Johnson 2013, 52). Taking a more specific perspective, business model innovation, is the providing of products or service offerings to customers and end users that were not previously available through business model replacements. The process of developing these novel replacements can be referred to as business model innovation. (Mitchell & Coles 2004, 17)

Additionally, it needs to be discussed how business model innovation can be understood within an incumbent firm, who are already working under an existing business model. Business model innovation is the discovery of a fundamentally different business model in an existing business (Markides 2006, 20; Schneider & Spieth 2013, 4; Spieth, Schneckenberg & Ricart 2014, 237). as well as a reconfiguration of activities in the existing business model of a firm that is new to the product service market in which the firm competes (Santos et al. 2009, 14). In summary, business model innovation activities range from incremental changes in individual components, extensions to the prior business model, introduction parallel running business model, to the disruption of the existing business model, possibly replacing the existing business model with a fundamentally different one (Khanagha et al. 2014, 324).

Whereas Markides (2006, 20), Santos et al. (2009, 14) and Khanagha et al. (2014, 324) see business model innovation only occurring in existing businesses, it needs to be highlight at this point, that others acknowledge that business model innovation is especially beneficial for start-ups who attempt to grow significantly but it is argued here, that business model innovation is just as important for incumbent firms to identify new growth opportunities (Günzel & Holm 2013; Remane et al. 2017, 4) showing that business model innovation can occur in the setting of big established companies as well as young start-ups. For this thesis the focus lies on incumbent firms and how they might utilize the concept of business model innovation and achieve changes to their existing business model, possibly replacing the business model altogether. Focusing on incumbent firms, the perspective on business model innovation involves the logic of a firm (Casadesus-Masanell & Zhu 2013, 464) or the business logic (Schneider & Spieth 2013, 4). This perspective describes business model innovation as a process that changes the perception of what a company does and, more specific, how it creates, delivers and captures value. Hence, business model innovation attempts to renew a firm's core business logic in contrast to focusing on the innovation of single products or services (Schneider & Spieth 2013, 4) and how to commercialize a firms' assets (Gambardella & McGahan 2010; Hossain 2016, 345). Defining business model innovation as a process that deliberately changes the core elements of a firm and its business logic (Bucherer et al. 2012, 184; Aspara et al. 2013, 460), changing the logic on how to create and capture value (Casadesus-Masanell & Zhu 2013, 464; Spieth, Schneckenberg & Ricart 2014, 238; Hossain 2016, 345) and establishing value-creating links among the corporation's portfolio of businesses (Aspara et al. 2013, 460). Looking at business model innovation from this perspective, shows the difference between young companies and incumbent companies. While young companies are still in the development of their business logic, incumbent firms already have developed theirs. Shifting the focus of business model innovation away from developing a new business logic towards change or replacement of an existing one. All in all, incumbent firms, usually run several business models within their own structure already. Different departments responsible for certain products, customers or industries, develop their own understanding of the company and what it does. Hence, observing the change of a business model, might not have a large impact on the whole company, but could tremendously impact an individual department's business model.

Literature suggest the application of two major options. First, by comparing the novelty of the business model against the old business model of the company or the industry. Second, taking the number of BM-components that experienced the change. However, the literature offers no unified answer for how many components need to change for it to be a business model innovation. Some arguing that one component-change can be enough (Santos et al. 2009; Amit & Zott 2012; Bock et al. 2012; Schneider & Spieth 2013), whereas others argue that all components must change (Yunus et al. 2010; Velamuri et

al. 2013). Showing the large convergence of answers. (Foss & Saebi 2017, 211). There are four different types of BMI. Originating from the dimensions of the novelty to a firm or industry and the scope of change of business model components. Hence, a modular change new to a firm can be described as evolutionary. New to a firm and architectural change to components, being adaptive BMI. Newness to an industry with modular changes can be described as a focused BMI and finally an architectural change and new to an industry is a complex BMI. (Foss & Saebi 2017, 217) The 4 types of business model innovation pose different challenges and therefore requirements for businesses attempting to bring them forward. The measurement of business model innovation and specifically when a company has achieved business model innovation is a large topic by itself and will not be covered in more detail at this stage. The short introduction above is only meant to give an insight how business model innovation could be observed, identified and categorized.

Having discussed the definition of business model innovation and how business model innovation manifests and impacts new and existing businesses, the next section will shift towards how the change unfolds and offers suggestions for purposefully initiating business model innovation.

2.1.3 Process of business model innovation

Now that it has been established what business model innovation is, it needs to be discussed how an incumbent firm might reach business model innovation in their context. Other research suggests, that for a company to achieve more frequent and quicker business model innovation or renewal, it requires high strategic sensitivity, leadership unity and resource fluidity. Which can be summarized under the term of strategic flexibility (Doz & Kosonen 2010, 370-371) Business model innovation is often tried to be achieved by implementing certain process models that guide the participants through the different stages and components of a functioning business model. Such a systematic approach for business model innovation can indeed help overcoming the challenges of business model innovation and arguably drive growth (Gobble 2014, 60). It is even argued that the application of process models originating from product innovation (Bucherer et al. 2012; Schneider & Spieth 2013, 9) or scenario techniques (Gnatzy & Moser 2012; Schneider & Spieth 2013, 9). could help facilitate business model innovation if applied in its context. Such process models can be found abundantly in research, which are providing linear organized stages and explicating the definitions of each stage, while providing guidance of how to reach from one step to another.

Step models in recent literature, reach between two and six steps. Starting with models, showing two and three steps are focusing more on concepts like exploration and

exploitation as the first and second stage of the process (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 388-396; Schneider and Spieth 2013; Remane et al. 2017, 6) and possibly adding a third step focusing on effects of the process (Schneider & Spieth 2013; Remane et al. 2017, 6). Fig. 1 showing an exemplary 3 step model of business model innovation as suggested by Schneider and Spieth's article (2013, 20) in which the 3 mentioned stages are applied. Exploration describing the initial design, testing and development of the business model whereas the exploitation phase describing the scaling up of the business model and sustaining its growth through organization-wide learning (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 388-396). While the model of Sosna, Trevinyo-Rodriguez and Velamuri (2010, 388-396) integrates the sustainment of the business model innovation process in the second step. This model is complemented by Remane et al. (2017, 6) adding a third step in which the continuation of the model is added through the "effects"-step.

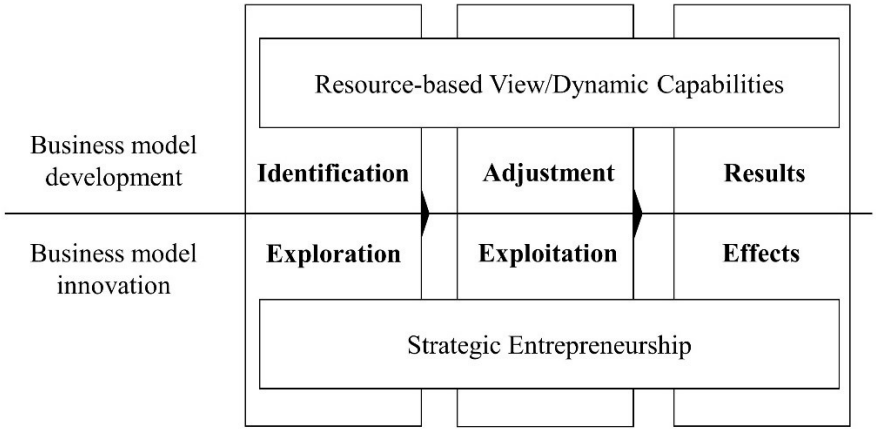

Figure 1 Business Model Innovation process (Schneider & Spieth 2013, 20)

When it comes to process models consisting of 4 stages, there are 2 different approaches on organizing these. The first one being oriented on customer integration into the process and the second focusing more on the internal implementation inside an organization. Customer identification, customer engagement, value delivery and monetization (Baden-Fuller & Haeflinger 2013; Hossain 2016, 349) or analysis of customer preferences and alignment with initial product/service, business model innovation, confirmation of alignment and finally fitting the business model with identified customer needs (Pynnönen, Hallikas & Ritala 2012, 2) The two models show, that they are taking the customer into the centre of the process, organizing every step around them, in order to find the best solution for them. Arguing that the process of business model innovation requires the integration of customers into the process. Their input is crucial to determine

the dimension of value creation and can, if properly applied, help a company redesign themselves or even the way business is done in the respective industry (Pynnönen, Hallikas & Ritala 2012, 1). Below an example for another 4-step process, being internally focused, can be found. For this model, the process of business model innovation includes the stages of initiation, ideation, integration and implementation (Frankenberger et al. 2013; Remane et al. 2017, 5), even though not neglecting the importance of the external environment, the model does not directly use the customer-focus like the model mentioned previously. The model proposed by Frankenberger et al.'s article (2013; Remane et al. 2017, 5), focuses more on how a firm might organize the stages within their own boundaries.

A model consisting of 5 steps has been proposed by Osterwalder and Pigneur (2010) (Remane et al. 2017, 6). mobilization, understand, design, implement and concluding with management. This five-step model like the four-step model proposed by Frankenberger et al.'s article (2013) lays its focus on the organization internal implementation of business model innovation. Eurich, Weiblein & Breitenmoser's article (2014; 10-15) propose six steps for business model innovation. Their model incorporates "networked thinking" into the business model innovation process, adding a dimension on thinking about the interrelations between business model components, the external environment and a company's mission, making their process model suitable for newly found businesses as well as established companies. Their model starts with determining a mission and assumptions on the business environment, analysing interdependencies, determining and analysing design alternatives, creation of business model alternatives, selection of a business model innovation and finally testing and realizing the business model in practice (Eurich, Weiblein & Breitenmoser 2014, 10-14) Six-step process of BMI: demonstrate value creation, generate business model options, identify risks for each option, prioritize risks, reduce risks through business experiments and organize incubation (Euchner & Ganguly 2014; Hossain 2016, 349). Even though using the same amount of stages, in their business model innovation processes, Euchner, Weiblein and Breitenmoser (2014, p. 10-15) and Euchner and Ganguly (2014, 34 – 38; Hossain 2016, 349) do have one distinct difference in their models. Whereas the model of Eurich, Weiblein und Breitenmoser (2014, 10.15) stays longer in an exploration phase, and making more research early on, the model introduced by Euchner and Ganguly (2014, 34 – 38) attempts to get quicker to the experimentation of different opportunities. Whereas Eurich, Weiblein and Breitenmoser (2014, 10-15) quickly reduce the amount of business model options, Euchner and Ganguly (2014, 34-38) try to keep as many business models in consideration and conducting a risk analysis, to decide which of the options to pursue further.

No matter how many steps are applied in the different process models. Most of the above share one commonality. A Continuous process design, that allows practitioners to return to earlier stages and repeat certain steps, is becoming more and more accepted as

the leading assumption for business model innovation design. The next chapter will discuss in further detail what a continuous design is and why it is important.

2.1.4 Nature of business model innovation processes

Even though process models are being proposed the concept of business model innovation has developed more towards a dynamic perspective that is no longer looking at the business model at one given point in time but rather an ongoing change, like business model innovation or business model adaption (Saebi, Lien & Foss 2017, 568). Just as the previously discussed models show, one of the biggest challenges seems to be the decision of which business model to pursue further and being able to exclude options, either by exploration (Eurich, Weiblein & Breitenmoser, 10-15) or experimentation (Euchner & Ganguly, 34-38). Business model innovation processes are dependent on trial-and-error learning (Sosna et al. 2010), or discovery driven approaches (McGrath 2010; Remane et al. 2017, 6) Essentially the process of business model innovation is an evaluation of different available opportunities against each other and what competitive advantage the organization can exploit in each of the opportunities. Finding the most rewarding opportunity for the organization is the goal of this process and requires continuous adjustment and refinement of the business models to find the right answer to this question. (Ahokangas & Myllykoski 2014, 12-14) And even though the article of Pynnönen, Hallikas and Ritala (2012, 4-5), for example is describing their process in stages, these stages are interconnected and repetitive. By going through the phases in a repetitive pattern, the perfect fit of the business model, the customer requirements and the organization are reached. Business models need to dynamically change, through specification, refinement, adaption, revision and reformulation, based on the gathered knowledge from engaging in the business model innovation process (Ahokangas & Myllykoski 2014, 8). In recent literature the important role of learning and experimenting in business model innovation processes has been highlighted (Doz & Kosonen 2010; McGrath 2010; Sosna et al. 2010; Wirtz et al. 2010; Eppler et al. 2011; Eppler & Hoffmann 2012; Achtenhagen et al. 2013; Andries & Debackere 2013; Cavalcante 2014; Foss & Saebi 2017, 213) Hence it is argued that a BMI process is not static but a dynamic process requiring constant adjustment to react to internal and external changes (Demil & Lecocq 2010; Bucherer et al. 2012; Schneider & Spieth 2013, 9; Hossain 2016, 346). In other words, BMI manifests through experimentation (Guo et al. 2016; Hossain 2016, 348) In fact, the higher the complexity of the business model innovation gets, the more radical experimentation becomes appropriate to refine current logics and justify further commitments (Andries & Debackere 2013; Hossain 2016, 348).

Experimentation and trial-and-error behaviour is tremendously important for reaching "fit" between the components of the business model, reaching this "fit" plays a major role

in the success of BMI processes (McGrath 2010, Smith et al. 2010, Sosna et al. 2010; Schneider & Spieth 2013, 9; Taran, Boer and Lindgren 2015, 310). Making BMI an evolutionary process that develops over time and undergoes changes (Dunford et al. 2010; Schneider & Spieth 2013, 9) Sometimes also described as an on-going, discovery-driven learning process (Chanal & Caron-Fasan 2010, McGrath 2010, Sosna et al. 2010; Schneider & Spieth 2013, 9 & 22-23).

Designing a business and refining the commercially viable architecture for revenues and costs is critical to enterprise success (Teece 2010, 174). The refinement of the model is a continuous task to keep a company's model viable. Furthermore, Teece's article (2010, 187-190) argues that no business model is apparent in the early stages but only after considerable trial-and-error and figuring out "deep truths" of customers and society as well as the own organization, a business model is likely to become successful. Hence, a business model designer needs to understand the new technology, customer needs and the logic of the organization. Where the right architecture of a business model depends on understanding costs, customers, competitors, complementors, distributors and suppliers now and in the future. In the beginning mainly based on hunches and guesses, the decisions are being replaced by proven assumptions over time resulting in adjustments of the business model to changing information availability (Teece 2010, 188). Ultimately BMI processes might not be a deliberate corporate-level decision making process but rather a more organic one, using iterations and sequences in different units, groups and levels of a firm (Spieth, Schneckenberg & Ricart 2014, 244). The dynamic, continuously changing, and organically developing process has an impact on how they should be implemented in organization. The dynamic perspective of BMI processes, sees the development of new BMs as an initial experiment, followed by constant revision, adaption and fine tuning based in trial-and-error learning (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 384). Based on external triggers, companies plan, design, test and re-test alternative business models until they have found the right business model to answer to the trigger (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 384). In the implementation of BMI requires organizational realignment, mobilization of scarce resources, development of unique capabilities, adjustment of organizational structures and the promotion of learning, change and adaptation (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 384) The process of BMI is a continuous reaction to changes in the environment (Demil & Lecocq 2010; Schneider & Spieth 2013, 9) BMI undergoes a trial-and-error process before its final stage (McGrath 2010; Sosna et al. 2010; Hossain 2016, 348).

Another important question that arises is to clarify the difference between business model innovation and other innovation projects, justifying the need for having a different process than other research and development projects. Incumbent firms most often already have implemented research and development processes, commonly even having own departments for that purpose. However, business model innovation opportunities

cannot be fully anticipated in advance due to their complexity (Foss & Saebi 2017, 218; Rivkin 2000) as well as the possibility, that new solutions might emerge and dethrone currently valuable business models (Gambardella and McGahan 2010; Hossain 2016, 349). Hence, are business model changes considered as a "risky" step, requiring the change of the current business model, which is costly, time consuming and uncertain in success (Amit and Zott 2012; Hossain 2016, 344; Saebi, Lien & Foss 2017, 569-570).

As business model innovation will require substantial investment of time and money while not being able to predict the outcome, especially in the early stages of development it is difficult to prove the feasibility of business model innovations, especially when they enter into competition with research and development projects, that can clearly show the impact on the current business model early on, drawing on experience from previous projects. Usually innovative projects are evaluated according to their financial parameters like sales, price, revenue, income and required investment. All the aforementioned factors are highly uncertain especially in business model innovation projects (Evans & Johnson 2013, 52) but less in research and development that tries to improve the current business model of an organization. Therefore, it is suggested that business model innovation projects should be evaluated according to a different scale than traditional R&D and Innovation projects of an organization. Assessing the stress, the idea would cause inside an organization and the anticipated return for the project might be possible metric, being suggested by Evans and Johnson's article (2013) in which they introduce the Innovation Readiness Level framework. Another important factor, when it comes to the evaluation of business model innovation projects is the involvement of top management in the process, as the BMI projects require restructuration of the organization (Hossain 2016, 346) posing a large and often risky impact on the existing business model in place. Conclusively a more appropriate and separate evaluation system is advisable.

After having discussed what models are being used and what nature the process has, it is important to mention the importance of collaboration and cooperation for the successful implementation of a business model innovation process. Innovation is rarely done by just one person but a group of individuals cooperating with each other and finding the answers on a variety of questions, necessary to answer for the exploitation of an opportunity (Ahokangas & Myllykoski 2014, 7-8). Additionally, does successful BMI require leadership unity (Doz & Kosonen 2010; Hossain 2016, 346), leading to the conclusion, that companies should encourage dialoguing, revealing, integrating, aligning and caring to ensure managers and individuals to engage in exploitative and explorative activities, regarding business model innovation (Smith et al. 2010; Hossain 2016, 346). Furthermore, the question of who is participating in the process needs to be clarified, conducting business model innovation can be done internally, externally or a mix of the two. Taran, Boer and Lindgren (2015, 309-310) distinguish between 3 choices. First, staying internal. Second, start

internally and consequently open to external input. And third, innovate with external partners (acquisitions, partnerships, open innovation etc.)

As mentioned before is the "Fit" of a BM, highly important for the success of the business model innovation and it depends not only on the reiteration and adjustment over time but also depends on the fit between: required characteristics of the people involved in, and the organization of the process, which derives from the characteristics of the process and the type of innovation involved and the actual characteristics of the people involved, their perception of the innovation and the innovation process, and the way these perceptions are effectuated in the organization of the process (Taran, Boer & Lindgren 2015, 310-311, 321). Showing the importance of everyone for defining the fit of the business model innovation, for industry, company and each individual affected by the business model changes.

After introducing the general state of business model innovation research, the next section will take a closer look at business model innovation research within incumbent firms. As previously mentioned, do established companies show different challenges, requirements and possibilities, when it comes to business model innovation and therefore need to be dealt with separately. Following sections will present the most prominent topics in recent literature concerning business model innovation within incumbent firms, starting with running several business models within the same organization, followed by the phenomenon of path dependencies, the dominant logic of a firm, alignment of business model innovation with the current business model and finally the interdisciplinary nature of business model innovation when executed in the context of incumbents.

2.2 Business model innovation in the context of incumbents

2.2.1 Co-existence of business models

The context in which business models are being innovated has a big influence and many implications for how a business model innovation processes should be organised. Furthermore, it can offer a glimpse on what challenges one might face throughout the process. Originally, it has been assumed that every organization is based on one business model, in the fear of a new business model inside of an existing organisation demanding the cannibalisation of the existing business model (Teece 2010; Ahokangas & Myllykoski 2014, 9). It is not uncommon that even well-established business models, which have been largely successful in the past and are still in the present, are in fact not as permanent as initially thought (Chesbrough 2007, 2010, Lindgardt et al. 2009; Schneider & Spieth 2013, 2). This phenomenon is also described as companies falling victim to their own

success (Doz & Kosonen 2008, 6; Schneider & Spieth 2013, 2), even though they might be capable of more with the resources and capabilities they currently have access to or even possess in their own resource-base (Amit & Zott 2011, 2; Schneider & Spieth 2013, 2). As successful exploration of business model innovation opportunities can threaten existing exploitation of the current business model, it has been suggested that a separation through the establishment of two unrelated companies might be the best solution to this problem (Markides 2013, 314). However, changing business environments demand a simultaneous capability, to be able to do both within the same organisation, finding new competitive advantages, when old ones fail to deliver. Which can possibly be achieved by engaging in business model innovation (Smith, Binns & Tushman 2010, 450; Schneider & Spieth 2013, 4). On the one hand, a separate organization holds the advantage of exploiting entrepreneurial spirit and flexibility that is sometimes needed in order to reach radical changes. However, by keeping the businesses separate, potential synergies cannot be exploited, which is one major argument for keeping the business model innovation within the existing business. (Markides 2013, 314) On the other hand, literature suggests that spin-offs might be faster developing in the beginning but are worse keeping and capturing market power later. Hence, a balance between integration and separation needs to be found in which both business models can survive and thrive. Recently, it has been argued that an organization should be capable of, not only developing new business models, but also run several business models simultaneously. Furthermore, should these business models be interrelated and interact with each other. (Sachsenhöfer 2016, 38) It is no longer enough to ask the question of either, or? In today's business environments, a firm needs to be able to develop and run several business models overcoming conflicts and barriers arising from path dependencies and pre-existing structures. Adopting new business models while not compromising the old (Gärtner & Schön 2015, 53). If a firm can run more than one business model at the same time, efficiency gains, synergies, for example when thinking about economies of scope, leveraging of the same structure, and running with lower costs than founding a new organization could be achieved. However, a pre-existing business model does not necessarily have to be complementary but can also be a conflicting asset for the new business model (Sachsenhöfer 2016, 38-39). Still, some opinions even go as far as to argue that business model innovation is an important lever for small and large firms, if done wrong resulting in failure in the market, disregarding if they are complementary or conflicting with the current business model (Teece 2010; Hossain 2016, 342-343). Conclusively, the implementation of a business model innovation within the same organization, requires careful management, that is either creating the synergies between the business models or avoiding the conflict between them.

The process of business model innovation within an existing organisation, is another question, requiring to keep it separate from the existing model and its artefacts, to prevent spill-overs of corporate culture, policies and systems which could jeopardize business

model innovation (Christensen 1995; Markides 2013, 314). Be it an established company or a newly found business, the development of a new business model requires continuous development and adjustment of the model to fit the business environment it is designed for. For established companies this means they need to find a touch point with the existing business model and how to fit them next to each other (Ahokangas & Myllykoski 2014; 9-10) Therefore, for a successful execution of business model innovation a company needs to develop the capability of building and sustaining firm performance while changing the business model at the same time. Demil and Lecoq (2010) for example, call this capability "dynamic consistency". On the other hand, Markides' (2013, 313) article describes the running of two business models simultaneously as an ambidexterity challenge, being applicable in incumbent firms trying to come up with new business model innovations. An existing organisation will face conflict engaging in business model innovation, which needs to be dealt with and not ignored. (Smith, Binns & Tushman 2010, 451). Business Model Innovation in incumbent firms will frequently have to deal with internal conflict and trade-offs between old and new ways of doing things (Markides 2006; Ahokangas & Myllykoski 2014, 9). For example, clashes of shared mental models and shared assumptions concerning organizational values, organizational culture and organizational design are a common occurrence (Foss & Saebi, 2017). On top of clashes, do business model innovation processes involve complex investment decisions, costs of acquiring new resources, cannibalization of existing businesses, obsolescence of core competencies, cognitive and organizational inertia and internal resistance (Desyllas & Sako 2013; Hossain 2016, 349). Therefore, it is argued that critical capabilities of business model innovation need to be built up. Such as an orientation towards experimentation, balanced resource use, clear leadership, organizational culture and employee commitment (Achtenhagen et al. 2013). Just as well as strategic sensitivity, leadership unity and resources fluidity are named to be critical for business model innovation success and reaching strategic agility within a company (Doz & Kosonen 2010) The best suitable summary of business model innovation capabilities, also used for this thesis, is appropriate change leadership, experimentation and effectuation, being a summary of the all the above (Schneider & Spieth 2013, 6).

In fact business model innovation capabilities seem to be more important for business model innovation success as one might think, commonly it is not the inability to recognise the opportunities of technologies but it is the inability to integrate the technology into the existing business model (Chesbrough 2010, 358). Meaning that incumbent firms do see opportunities for business model innovation but are likely to discard them as they are not able to make them co-exist. One reason might be, that the reallocation of existing firm resources and processes is likely to cause harmful internal conflicts, which individuals are trying to avoid (Spieth, Schneckenberg & Ricart 2014, 243). The barrier is also mentioned, in recent literature as obstruction and is accompanied by confusion, being two

major barriers for business model innovation (Chesbrough 2010; Schneider & Spieth 2013, 6). The integration phase of business model innovation attempts to formulate a complete and consistent business model targeting to overcome these main barriers of obstruction and confusion about the business model innovation. The inability to align all business model elements and share the knowledge with others are a result of a failed integration of the business model innovation with the existing organisation (Täuscher & Abdelkafi 2017, 163) requiring the involved parties to recognize missing information and finding a way to represent the gained knowledge so it is shared effectively with others (Eppler & Hoffmann 2011; Täuscher & Abdelkafi 2017, 163). For decentralised power structures, most often the case in incumbent firms, the conflict and competition between power centres becomes more important, as different initiatives benefiting one part might damage another, which will result in conflict and negligence. Contributing to the two major barriers for the process of business model innovation. First, conflicts that arise with existing assets and business models, as mentioned as obstruction and second, cognitive barriers, meaning to communicate the essence of the business model, previously mentioned as confusion. (Gärtner & Schön 2015, 50)

Acknowledging that business models already exist within an organization and have an impact on how new business models are innovated, as discussed during this chapter, the next chapter will discuss the mentioned arising conflicts between old and new and argues that path dependencies are one big topic to consider, when trying to understand where conflict originally comes from.

2.2.2 Path dependencies

Why is it then so difficult to develop and run more than one business model simultaneously? This thesis argues that path dependencies are the reasons for established companies, having trouble of successfully engaging in business model innovation. The concept of path dependency is important to consider when designing new business models as they affect the business model innovation process negatively and should also be considered for the design phase of a new organisation (Gärtner & Schön 2015, 47). Examples of path dependency are the investment effect, learning effect and adaptive expectation/cognition (Gärtner & Schön 2015, 47), which describe the allocation of resources for projects in line with projects related to the current business model, as the past learning experiences create expectations to what behaviour will wield the best result. What these concepts are and how they relate to business model innovation is being discussed below.

Path dependency describes the effect of past decisions and experiences made and their impact on future decision-making. Therefore, individuals and managers in a company might be unable to react to changing external conditions due to past events that led to a

negative conclusion at the time (Saebi, Lien & Foss 2017, 570). Leading to companies preferring "more of the same" innovations to keep their company fixed on the same value proposition, using same technologies and customers (Taran, Boer & Lindgren 2015, 302). In fact, innovation efforts deviating from the currently existing business are likely to face internal resistance (Berends et al. 2016, 200). Innovating a business model, thus, faces big challenges with such path dependencies in place, previously built up under the current or an even older business model (Saebi, Lien & Foss 2017, 568). Not only do path dependencies block the development of new business models but also the implementation of a new business model next to a currently running traditional business model becomes difficult as it requires the company to combine often incompatible value-chain activities in relation to the existing business model (Markides 2013, 313).

Hence, are traditional configurations of firm assets the result, due to resistance of managers fearing negative consequences on their own business areas resulting from the development and implementation of new business models. Tensions between established, currently viable, business models and new ones, is an issue business model innovation must deal with in incumbent firms. Otherwise experimentation of new business models will be difficult to achieve as existing more powerful business models will block their development. (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 397) Factors like novelty, lock-in, complementary and efficiency are the key aspects of business model innovation (Amit & Zott 2010). These factors may often conflict with traditional configurations of firm assets, whose managers are likely to resist experiments that would affect their ongoing value to the company (Chesbrough 2010, 358). Looking at the individual level, for new business creation the prior education and work experience of the founder is influential on the choice of business model, and what experience the person has had in his or her life, whereas for existing businesses, organizational inertia and lock-in effects will have the biggest influence on the choice of business model innovation, looking at the collective level of all the individuals within an organization. In other words, the inertia and lock-in of existing businesses are based on prior business models that have proven successful in the past (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 384). Especially for companies working in highly complex business environments, they tend to adopt path dependent behaviour, as it helps the individual to make sense of his or her external environment (Gärtner & Schön 2015, 49) Conclusively, managers tend to stick to what they already know when designing new business models, being cognitively constrained originating from path dependencies related to their position and related tasks (Bohnsack et al. 2014; Remane et al. 2017, 6). Therefore, business model innovation faces the often-described inflexibility in existing firms, as these pre-dominant assumptions, cost structures, unit margins and velocity elements exist based on prior external and internal conditions, that do not necessarily apply any longer. This inflexibility needs to be overcome for business model innovation to be successful (Bertels et al., 2015; Hossain 2016, 347). All in all it

is argued, that tools and models are necessary to overcome cognitive biases such as path dependencies and enable experimentation in the business model process or that at least processes and tools designed for business model innovation processes, within incumbent firms, should bear path dependencies in mind (Spieth et al. 2014; Remane et al. 2017, 6) The phenomenon of staying with the old is not only thematized by path dependency (Taran, Boer & Lindgren 2015, 302) but also concepts like strategic momentum (Taran, Boer & Lindgren 2015, 302) and prior related knowledge (Cohen & Levinthal 1990; Taran, Boer & Lindgren 2015, 302) contribute to the fact that companies rarely, if ever change or question their business model.

Especially the adaptive expectation/cognition is interesting to look at, as it can be linked to the dominant logic of the firm and is one possible explanation why business model changes end in conflict. Through previous decisions, individuals learn what behaviour is expected and what outcome is admirable. Changing these conceptions, will result in the conflict with those expectations, leading to conflict within the individual. To give an example for path dependency negatively impacting an organization, the example of Sony is appropriate at this point. Sony, developing a siloed organizational structure, becoming a vast conglomerate grown too big to change direction, and a culture that stifled innovation (Gobble 2014, 58) resulted in them not developing a product similar to Apple's iPhone, even though the technology would have been available to the company. Previous decisions about Sony's business model, hindered the development of such a product. The reason why Apple's iPhones were so successful, is not only their product design, but the business model concept surrounding the platform installed on each iPhone, allowing the distribution of software and the execution of micro-transactions for each participant in the apple software environment. (Gobble 2014, 58 -63). Sony not having a business model that would support the above, only saw the high priced mobile phones, not matching the business model logic they applied at that time, leading to high prices and therefore little profit margins, disregarding the potential it could have shown if business model changes would have been implemented hand in hand. Sony has not been the only company falling into this trap, Nokia, once being the market leader in mobile phones, faced the same situation and came to a similar result, having the technology available to produce a product similar to Apple's iPhone, but not being able to capture enough value within the existing business model to justify its production.

Ultimately, it is being argued that due to a collection of path dependent decisions, an incumbent firm will develop a dominant logic of how to do business, which leads to conflict when attempting to innovation business models. Hence, the next sub-chapter will deal with the concept of the dominant logic of the firm.

2.2.3 Dominant logic of the firm

Now that it has been discussed that past decisions, influence decisions made in the future, we should shed light on another concept. It is argued that the result of all past decisions, throughout the process of developing path dependencies, will accumulate in a dominant logic of a firm. The dominant logic describing the collection of all past decisions and experiences made and attempts to explain, why a company decides the way it does. In other words, the dominant logic of the firm is the explanation for each decision made by an individual within an organization. Understanding and complying with the anticipated logic of an individual's firm leads to certain behaviour that enforces more of the same. The concept of the dominant logic of a firm is originating in strategic management (Bettis & Prahalad 1995) thinking outside of this established logic of how to create value can also be described as "thinking outside the box" (Frankenberger et al. 2013; Täuscher & Abdelkafi 2017, 163), as it will be established later, are business models closely related to strategy and business model innovation is constricted by path dependencies and conclusively the result of the process, the dominant logic of the firm, establishing a pressing need to address these concepts in combination with each other. Furthermore, dominant logic of a firm generally describes the basis for decisions to originate from past successful decisions made within the organization, which can be associated with a positive reinforcement type of logic or path dependencies, which also incorporates negative outcomes of past decisions (Täuscher & Abdelkafi 2017, 163) As business models are a representations of a firm's strategy, changing the business model requires a shift in a company's strategy and vice versa (Magretta 2002, Zott & Amit 2008). Especially in incumbent firms when a business model is already in place, the change of it becomes a complex issue, requiring strategic change in the top levels of management (Foss & Saebi 2017, 218) Therefore, discovering interdependencies and consequences of decisions made in a business model innovation process helps managers' understanding of business model design. Managers in incumbent firms fail to see information that would require a company to change its business model, if the information seems irrelevant to the current business model (Gobble 2014, 60). By first, understanding the current dominant logic of a firm and second helping them to objectively put the logic into perspective with external factors, business model innovation processes might be supported (Weiblein & Breitenmoser 2014; 15) Specifically Incumbent firms need to engage in a continuous reconsideration of their business model assumptions, either to respond to external changes or to proactively anticipate changes (Chesbrough 2010, Spieth, Schneckenberger & Matzler 2016, 404) Some even argue, that if a company is not able to overcome its dominant logic, innovative ideas cannot be created at all. (Chesbrough & Rosenbloom 2002; Chesbrough 2010; Täuscher & Abdelkafi 2017, 163) The change of a business model requires the change of an organization as well as the logic within the business itself. It requires to

change the understanding of what and how individuals do things (Markides 2006; Chesbrough 2010; Ahokangas & Myllykoski 2014, 9). A deviation from an existing dominant logic of a firm might even require an external intervention to drive change forward and is not always possible from the inside of the organization (Spieth, Schneckenberg & Ricart 2014, 244). Therefore, it is not surprising that arising inertia and defending the status quo is a common occurrence in the business model innovation process within established firms (Doz & Kosonen 2010; Schneider & Spieth 2013, 6).

For example, is Chesbrough's article (2010) investigating the impact of an existing business model on business model innovation. By investigating innovation projects in the Xerox company, the author identified that projects close to the currently existing business model were more likely to proceed, while the ones that did not were either cancelled or continued outside the company. Within this company new technologies that did not have a use in the current business model, even though creating value, were not developed further as they would have required a change in the business model. (Chesbrough 2010, 354-356) Novelty, lock-in, complementary and efficiency are the key aspects of business model innovation (Amit & Zott 2001; Hossain 2016, 348). However, these aspects can hinder business model innovation as traditional configurations might drive managers to resist change and experiments that threaten the ongoing value of the firm (Chesbrough 2010; Hossain 2016, 348). Whereas three common challenges of business model innovation processes are resistance in overcoming the existing business logic, not thinking in terms of business models and an absence of creative tools supporting the process of business model innovation (Frankenberger et al. 2013; Remane et al. 2017, 25). Therefore, it is argued that the dominant logic of a firm should be considered more closely when engaging in business model innovation processes, as such a logic has large implications for how a business model innovation process should be designed in each individual case, meeting the needs of these long-term built up logics and structures.

Placing the challenge of business model innovation on path dependencies and the dominant logic of the firm and the thereby resulting resistance to change, it is important to address the multidisciplinary of the business model innovation concept. Especially the link to a firm's strategy needs to be understood, which is argued to be one manifestation of a firm's dominant logic. The following chapter will discuss named links to different fields of research and argue for their importance.

2.2.4 Interdisciplinary nature of business model innovation

There seems to be no clear systematic understanding of the concept of business model innovation and in which field of study it belongs (Bock et al. 2010; Spieth & Schneider 2013, 2). BMs are often argued to overlap with business strategy (Chesbrough &

Rosenbloom 2002; Casadesus-Masanell & Ricart 2010; Zott et al. 2011; Schneider & Spieth 2013, 3) A business model being the direct result of strategy but not strategy by itself (Amit & Zott 2001; Osterwalder 2004; Casadesus-Masanell & Ricart 2010; Wirtz et al. 2016, 38) In fact it is argued that business models are the intersection between future planning, hence the strategy of a company, and the operative implementation of that strategy within the organization, dealt with in process management (Wirtz et al. 2016, 38). Following this argumentation, business models are trying to translate strategic decisions into a break-down that allows practitioners to align an organization's processes to its overall strategy. Therefore, are business models and strategy complements rather than substitutes, highlighting their differences, while acknowledging the importance of both (Zott & Amit 2013, 4). On the other hand the link of business model innovation to competitive advantage from the strategy field needs to be mentioned as well, especially the concept of dynamic capabilities, just like opportunities, these advantages need to identified and exploited over time, making the link between the two concepts apparent, and making business model innovation a possible tool to achieve dynamic capabilities and a sustainable competitive advantage. (Ahokangas & Myllykosiki 2014, 8–12) Strategic entrepreneurship holds one field of research that attempts to answer how an established firm could act in an entrepreneurial fashion (Schneider & Spieth 2013, 19). Therefore, it is directly linked to business model innovation as business model innovation is trying to respond to changing sources of value creation and reconfiguration of established ways of doing business (Alvarez & Busenitz 2001; Amit & Zott 2010; Schneider & Spieth 2013, 19).

Conclusively, can a business model be applied to capture value from innovations (Chesbrough & Rosenbloom 2002), define boundaries of a company (Zott & Amit 2011) but also create a direct connection between business strategy and business processes (Al-Debei & Avison 2010; Remane et al. 2017, 4) In other words, lies the difference between business strategy and business models in the mode of application. Whereas business strategy describes the relation between a company and its environment, the business model deals with the implementation of the strategy inside the company (Pynnönen, Hallikas & Ritala 2012, 3). On the other hand, it is argued, that business models are more generic and require a coupling with business strategy to gain a competitive advantage when designing new business models (Teece 2010; Hossain 2016, 345). Making them inseparable from strategy. Meaning that a business model, designed disregarding an organizations strategy, will not be able to provide a competitive advantage for the company, and most likely will not be accepted by the organization at all. For example, is Schneider and Spieth's (2013, 15-21) article using three theoretical perspectives to fit the concept of business model innovation into recent literature. The resources-based view, the dynamic capabilities and strategic entrepreneurship. As well as Teece's article (2010, 173) takes the

perspective of business models in the light of business strategy, hence, that business models ask the same question of how to build a sustainable competitive advantage.

From these two examples it can be inferred that business models are an interdisciplinary concept, that intersects with several different fields of study. In fact, it is often mentioned in current research that business models are combining different fields. However, even though, it is acknowledged that business models are interdisciplinary in nature, the concept remains fuzzy due to the unclear position of its origin. Several fields of research touch on the phenomenon but there is no clear anchor for any.

The interdisciplinary position of business models and business model innovation is largely discussed in the literature, between two (Teece 2010; Spieth, Schneckenberg & Ricart 2014, 238) to nine (Hossain 2016, 346 -351) interdisciplinary connections are being made. The most often mentioned fields being Strategy (Teece 2010; Zott, Amit & Massa 2011, 6-21; Schneider & Spieth 2013, 2; Spieth, Schneckenberg & Ricart 2014, 237–238; Taran, Boer & Lindgren 2015, 305; Hossain 2016, 344; Daspit, 2017, 787), entrepreneurship (Schneider & Spieth 2013, 2; Spieth, Schneckenberg & Ricart 2014, 237; Hossain 2016, 344; Daspit, 2017, 787), innovation management (Zott Amit & Massa 2011, 6-21; Schneider & Spieth 2013, 2; Spieth, Schneckenberg & Ricart 2014, 237; Taran, Boer & Lindgren 2015, 305; Hossain 2016, 344), organizational theory (Taran, Boer & Lindgren 2015, 305; Daspit 2017, 787) and Marketing (Daspit 2017, 787). Although, many researchers suggest the inherent link between the various fields, business models still lack a place in organizational studies, strategic studies as well as marketing science (Teece 2010, 175-176). It is therefore suggested that these links need to be further established in theory and investigated in more depth as they might hold fruitful results for all sides.

Lately the field of entrepreneurship has laid an eye on the concept of business model innovation arguing, that the difference between business model innovation and traditional product or process related innovation processes is not clearly defined. Therefore, the issue how companies could create supporting conditions and organize business model innovation processes in established firms is interesting to look at (Spieth, Schneckenberg & Ricart 2014, 243). Opportunities are usually discussed in the context of entrepreneurship, in which they define an opportunity as the formation of new means, ends or means-ends relationships. Describing the activity of introducing new goods, services, raw materials, markets or organizing methods to the market (Ahokangas & Myllykosiki 2014, 9). However, the process of developing these relationships and input factors has rarely been touched on and requires further discussion. In fact, entrepreneurial processes overlap in theory with the assumptions about the nature of business model innovation processes discussed prior, Ardichvili et al.'s article (2003) describes the process of opportunities as cyclical and iterative, involving recognition, evaluation and development of the opportunity, just like the process of business model innovation, as established prior. The

process, in Ardichvili et al.'s article (2003) drives the opportunity from a simple business concept, to a fully developed business model. (Ahokangas & Myllykoski 2014, 11) Hence, the process of business model innovation can be connected to the discovery and exploitation of opportunities discussed in the scope of the entrepreneurship field. It is discussed that opportunities first need to be discovered or recognized before they can be exploited. Business model innovation might serve as a tool for both, if organized correctly, making a new business model concept, an opportunity according to entrepreneurship that could be exploited, just within an incumbent firm context. (Ahokangas & Myllykoski 2014, 11) The combination of business model innovation and entrepreneurship might already have found a place within Strategic Entrepreneurship, dealing especially about the development and selection of opportunities inside an established company, which should be further investigated and might hold great potential for advancing the fields of research (Schneider & Spieth 2013, 21-22).

Business models are used for the commercialization of innovations by defining the creation, delivery and capture of value through an innovative idea or technological development (Chesbrough & Rosenbloom 2002, Chesbrough 2010, Teece 2010; Schneider & Spieth 2013, 1-3) Business models can be used as a unit of analysis and starting point of innovation strategies (Schneider & Spieth 2013, 3-4) but also are business models used to commercialize new ideas and technologies (Chesbrough 2010, 354). New technology does not guarantee success, the definition of a working business model in combination with the technology is vital to go to market and capture value (Teece 2010, 183). Hence, it can be argued that a business model is inseparably linked from a technological innovation, serving as a method to define the commercialization dimension. A business model is the content, structure, and governance of transactions designed to create value through exploitation of opportunities (Amit & Zott 2001, 511; Markides 2013, 313).

Furthermore, are business models an enactment of a specific opportunity (George & Bock 2011, 102; Spieth, Schneckenberg & Ricart 2014, 237). But on the same time offer a picture of how a company generates revenues and profits at one point in time (Yunus et al. 2010, 312; Spieth, Schneckenberg & Ricart 2014, 237). A business model is a cognitive configuration that is used to show the way a firm does business, opens up new opportunities to do business and allows to do research (Gärtner & Schön 2015, 41). Finally, customer value creation can be linked to the RBV, which is saying that the resources of a company aligned in the right way are providing a value for customers. (Clulow et al. 2007; Pynnönen, Hallikas & Ritala 2012, 2) The resource-based view being a prominent topic in strategic research. Hence it is argued that the business model concept is an interdisciplinary construct that combines several fields of study and tries to make it accessible for practitioners. BMs are originating from corporate practice, now being further developed by research (Lecocq et al. 2010; George & Bock 2011; Schneider & Spieth 2013, 3). Schneider and Spieth's (2013, 20) article see business model innovation as one

possible way of incorporating strategic entrepreneurship within a company, and thereby achieving the identification and exploration of new opportunities.

To conclude the literature review, the following chapter will attempt to combine recent research into one unified concept, that specifically addresses the challenges of an incumbent firm. Ultimately the process of shared cognition will be presented, that combines cognitive and strategic factors with business model innovation.

2.3 Shared cognition

After having established that business model innovation processes are constricted by internal inertia and resistance to change, resulting from path dependencies, manifest in a firm's dominant logic. It will now be discussed how business model innovation can help to overcome the challenges introduced throughout the previous chapters. As the challenge is a collective problem resulting from many individuals and how they interpret the dominant logic of a firm, one needs to look into how to support individuals overcoming path dependent behaviour and ultimately changing the dominant logic of the company to improve business model innovation capabilities in the long-term, while still preserving the current status quo of currently operating business models. To achieve this status, business models and business model innovation needs to be understood as a cognitive tool, that supports individuals within an organization to reach a state of shared cognition. What these constructs mean will be discussed below.

2.3.1 Business model innovation as a collective cognitive process

One needs to start with understanding what cognition means in the first place, followed what shared cognition is and finally how business models and business model innovation can serve as a cognitive tool to help reaching the state of shared cognition, especially the position strategy takes in this matter will be outlined in more detailed below, at this point it is only argued that strategy will play a major role in achieving shared cognition for business model innovation projects.

An individual's cognition describes the process of making sense of one's own environment. In the very basic sense cognition is there to guide action. We perceive the environment and act accordingly (Glenburg, Witt & Metcalf 2013, 573). Another used term are mental models, being a mental representation of a system imagined by an individual (where a system consists of all Variables included, the properties and states of these variables and finally the Causal or other relationships among the variables) and how it works (Huber & Lewis 2010, 7). Hence, mental representations are argued at this point to be an

outcome of cognitive processes. Furthermore, it is argued that business models should be considered as such a mental model resulting from an individual's cognitive process. Our perception is linked to how we can act on what we perceive, hence the expected effects and observed effects are also linked to perception. In an organizational context this means that individuals perceiving their environment will take into account an organization's capabilities and resources using such information to estimate expected and observed effects of certain planned actions or past taken actions, showing the apparent similarity to path dependencies and the dominant logic of the firm introduced previously. Furthermore, emotions of the individual will have an impact on their perception (Glenburg, Witt & Metcalf 2013, 580). A concept taking cognition into the organizational context is managerial cognition, just like cognition, managerial attention and interpretations of internal and external environments in determining managers' strategic actions (Kaplan 2011; Yang et al. 2018, 2). Furthermore, the concept is arguing that a business model is linked to the cognition of managers engaging in the creation of business models, as a reflection of their perception of what customer want, how they want it and all important issues concerning business models (Saebi, Lien & Foss 2017, 567). Following this logic, it is crucial to take cognition into account when designing business model innovation processes. Especially, as the outcome of our actions will consequently be used for our cognition and will therefore influence our future actions, furthermore, supporting path dependent behaviour within an incumbent organization (Glenburg, Witt & Metcalf 2013, 580-581).

Hence, interpreting the information that one is given and reaching a conclusion based on that information. Therefore, connecting business models and opportunities, business models can be viewed as the cognitive link between opportunity recognition and its consequent exploitation (Fiet & Patel, 2008; Ahokangas & Myllykoski 2014, 8) or more from a strategic perspective, BMs are a cognitive representation of management's understanding of what customers want, how to deliver value and how to capture value (Teece 2010). This process can become highly complex in the business model innovation context, as a tremendous amount of information needs to be accessed, interpreted and a conclusion needs to be reached of how and if to include into the new business model. It becomes especially complex as many parties within an organization need to be involved in this process, aligning opinions and levels of knowledge among the participants. New business models need to be formed collectively by those needed in envisioned futures (Ahokangas & Myllykoski 2014, 13) The process of idea creation and development is relying on the combination of individuals' inputs (Björk 2012; Schneider & Spieth 2013, 6), and should be collaboratively achieved and incorporated in the business model innovation context (Eppler et al. 2011; Schneider & Spieth 2013, 6). These individuals not only need to agree with each other of what the outcome of the business model innovation process looks like, but also need to bring information into the process, that they alone have access to. Furthermore, they need to make sense of each individual's input and create a cognitive

understanding of each individual's mind involved in the process. Especially, important is the manager in this situation, as his task is to summarize the information given by each individual and ensuring that each involved party understands it. However, at this point it is important to point out that unlike managerial cognition, this thesis argues that each individual's cognition, involved in the BMI project, is important to consider and not only the cognitive process of managers. Nonetheless, as facilitators, managers should receive a special attention. Facilitating such a process is not only highly demanding for the cognitive capabilities of the manager but also requires a social component that allows the manager to integrate each individual, important for each stage of the process and situational topic dealt with, throughout the process, so each participant is able to share the knowledge they can contribute the best. Companies usually have access to a variety of expertise, of which all have a different perspective onto certain topics. Referring to company silos, as mentioned previously, this expertise, specifically in the context of incumbents often develop separately from each other, developing diverging interpretations of their internal and external environment and specifically the interpretation of strategic decisions made by an incumbent's management. Business model innovation therefore is a difficult to manage process as the necessary information to engage in it lies with the functional heads of the incumbent company, whereas the decision-making power lies, elsewhere. To elevate this topic, researchers name that the process of business model innovation and experimentation requires the cooperation of operations, engineering, marketing, sales and finance. Involving conflicts between these functions. (Chesbrough 2010, 360). Showing that in order to be able to develop a new business model, several organizational functions are needed and demand to be properly managed to avoid conflict and enhance shared understanding of internal and external factors, establishing a state of shared cognition. Therefore, the cognition of individuals and managers enters the stage, as the mediator need to collect and cognitively make sense of the information fed into the process and decide on further steps taken.

From a theoretical standpoint, business models can be viewed as either being a representation of something real, that represents something that exists outside of an individual's cognition (Martins et al. 2015) or a purposefully designed system that does not necessarily has to exist outside the mind of the creator. The latter focusing more on the identification of principles, patterns, elements or configuration of successful business models (Osterwalder & Pigneur 2010; Casadesus-Masanell & Ricart 2011; Abdelkafi & Täuscher 2016), while the first approach anticipates business models that change in an evolutionary way (Demil & Lecocq 2010; Sosna, Trevinyo-Rodriguez & Velamuri 2010; Täuscher & Abdelkafi 2017, 162) It is argued that Business models are cognitive representations or artefacts of an individual's mind (Baden-Fuller & Haefliger 2013; Baden-Fuller & Mangematin 2013; Baden-Fuller & Morgan 2010; Massa & Tucci 2014) reflecting cognitive structures (Doz & Kosonen 2010), managerial schemas (Martins et al. 2015) or

cognitive instruments (Baden-Fuller & Mangematin 2013; Täuscher & Abdelkafi 2017, 162). Just like the interpretation by Martins et al.'s article (2015) Doz and Kosonen's article (2010, 371) sees business models as cognitive structures setting a boundary to a firm, how value is created and the organization of internal structures and its governance. In other words, business models are a cognitive frame or template showing how a firm conducts business (Zott et al. 2011; Lambert & Davidson 2013; Gärtner & Schön 2015, 39) On the other hand can a business model representations be seen as a self-contained, purposefully designed, two-dimensional image containing graphic and textual elements to convey information about business model understanding or specific business models, specifically when business model tools are applied (Täuscher & Abdelkafi 2017, 163). Hence, business models and their representations can help individuals understand the complexity of the issue, guiding them through the process of designing one, and possibly increase creativity and efficiency of the business model innovation process and ultimately achieve change within an organization (Chesbrough 2010; Remane et al. 2017, 2). Next to reduction of complexity, and an increase of efficiency and creativity of the business model innovation process, do cognitive representations of business models have several other important impacts on the business model innovation process, like increasing collaborative innovation (Eppler & Hoffmann 2012), reduction of complexity of the task (Doz & Kosonen 2010), unveiling of unthought off structures within the business model (Casadesus-Masanell & Ricart, 2007), effective communication of the business model (Osterwalder 2004) and a tool for sharing knowledge (Doganova & Eyquem-Renault 2009; Täuscher & Abdelkafi 2017, 160). Cognitive representations of business models are helping to augment the capacity of an individual's mind (Klingner, Tversky & Hanrahan 2011), second it becomes a storage for information, freeing up thought capacity of the user (Hegarty 2011), third it helps structuring information and the relations in-between (Larkin & Simon 1987), fourth it helps to reduce cognitive overload, providing the individual's mind with a visual perception option to process information (Card 1999), fifth the representations provide a returning path to information (O'Donnell, Dansereau & Hall 2002). Furthermore, away from the individual, cognitive representations support organizational communication and collaborative effectiveness (Eppler & Bresciani 2013) and for external communication (Zhang 2012). Ultimately the creation of cognitive representations can lead to the creation of a common understanding of mental models, experimentation and provides a tangible outcome (Eppler & Bresciani 2013) Furthermore it increases engagement of employees and team members (Bresciani, Tan & Eppler 2011; Täuscher & Abdelkafi 2017, 161-162).

Understanding, that business model innovation projects are dependent on individual cognitive processes as well as a conjoint cognitive effort of individuals participating in the process, the already previously mentioned impact of path dependencies and the dominant logic of the firm will be discussed below.

2.3.2 Dominant Logic, Path dependencies and shared cognition

Relating this to the previously introduced concepts of dominant logic of a firm and established path dependencies, negatively impacting the business model innovation process. Certain information will be filtered out, as not important, as it is not coherent with the general understanding of the company, or it will fall under the table as previous decisions make certain information seem unimportant as previously decided. Also, the established structures of a company should be considered, certain individuals will be integrated into business model innovation process, whereas others will not engage with them, as they have previously learned that their input is not valued. A firm's dominant logic, collective mindset (Prahalad and Bettis 1986) relates to BMI (Maglio and Spohrer 2013). The need for engagement with innovation is underpinned by the collective cognition among members (Daspit 2017, 789) The dominant logic of a firm on how to create and capture value brings forward the idea that information is being pre-filtered for corporate decision-making processes, making information not coherent with current believes less important and therefore fall out of the decision-making (Chesbrough 2010, 358-359). External changes are often ambiguous and uncertain. The manager or individual employee perceiving and interpreting (their cognition) these threats and opportunities will interact with organizational routines and beliefs to create an appropriate answer for the change perceived (Sosna, Trevinyo-Rodgriguez & Velamuri 2010, 386). As discussed, the beliefs and routines of a firm are based on prior experience, creating organizational inertia, lock-in effects and path dependencies, influencing the response of the individual.

The established link between cognition and dominant logic of a firm also leads to the conclusion that strategy is highly important in this matter, as each individual will make sense of the given information in light with the overall strategy of a company. Strategy becomes the filter for projects followed and information collected. Hence, if a company supports certain strategy-related projects, individuals will follow this path and therefore strategy will reinforce certain behaviour and create a selective cognition of individuals. This is another issue, that needs to be dealt with when considering how individuals establish their understanding in business model innovation processes. Relating this to the dominant logic of a firm or established path dependency, these will negatively impact the business model innovation process. Certain information will be filtered out, as not important, as it is not coherent with the general understanding of the company, or it will fall under the table as previous decisions make certain information seem. Also, the established structures of a company should be considered, certain individuals will be integrated into business model innovation process, whereas others will not engage with them, as they have previously learned that their input is not valued. A firm's dominant logic, collective mindset (Prahalad and Bettis 1986) relates to BMI (Maglio and Spohrer 2013). The need of engagement in innovation is underpinned by the collective cognition among members

(Daspit 2017, 789) The dominant logic of a firm on how to create and capture value brings forward the idea that information is being pre-filtered for corporate decision-making processes, making information not coherent with current believes less important and therefore fall out of the decision-making (Chesbrough 2010, 358-359). External changes are often ambiguous and uncertain. The manager or individual employee perceiving and interpreting (their cognition) these threats and opportunities will interact with organizational routines and beliefs to create an appropriate answer for the change perceived (Sosna, Trevinyo-Rodgriguez & Velamuri 2010, 386). As discussed, the beliefs and routines of a firm are based on prior experience, creating organizational inertia, lock-in effects and path dependencies, influencing the response of the individual. These added components to cognitive representations of business model, add a collaborative component to the concept, which shows the importance of reaching a shared understanding or shared cognition throughout the process of business model innovation. In this thesis it will be argued that ultimately that should be the goal of each business model innovation process as only through reaching a state of understanding the project will be able to thrive within an incumbent firm that has already established a dominant logic.

Many researcher already agree on the importance of Managerial Cognition in the process of BMI (Berends, Smith, Reymen & Pdoynitsyna 2016; Bucherer, Eisert & Gassmann 2012, Martins et al. 2015; Täuscher & Abdelkafi 2017, 161), opposed to this the role of individuals in general in this regard has been less acknowledged. However, some researchers take the individual already into account and argue that for the process of business model innovation the understanding of each involved participant is important for the whole group to proceed with the project, adding the individual next to the manager, for the success of business model innovation. Huber & Lewis's article (2010, 6-7) discuss, in their article, the influence of diversity on reaching a state of cross understanding of a team as well as conflict and its resolution. As business model involves many different functions and perspectives on the business, different individuals will be involved in the process, who need to be understood and integrated to make the new business model work. (Huber & Lewis 2010, 6-7)

Managers are the first ones to perceive and interpret changes calling for BMI and are also the ones deciding on what to do (Foss & Saebi 2017, 219). As previously established is top management support crucial for business model innovation to be successful, but not only top management is needed to start a business model innovation project but also lower levels of management who have greater connection with external input sources, and are capable of identifying new opportunities for business model innovation or act on external triggers. The importance of managers in the process of business model innovation comes from Managerial cognition being directly linked to BMI through the complexity theory. As the change requires a process of search of the manager combining the BM components. (Foss & Saebi 2017, 219). The manager is responsible for interpreting the

information of external environment and internal organization and needs to evaluate when and on what information to act.

Clarifying the impact of path dependencies and the dominant logic of the firm on individual and conjoint cognitive processes, it furthermore needs to be discussed how named path dependencies and dominant logics might be overcome to allow business model innovation. Therefore, the next subchapter will link BMI to a firm's strategy.

2.3.3 Importance of Strategy

The importance of managers in the process of BMI is evident as the strategic sensitivity accelerates the BMI process. Strategic sensitivity is the anticipation, experimentation, distancing, abstracting and reframing of business models (Doz & Kosonen 2010; Hossain 2016, 345). The role of leaders for searching, experimentation and shifting to new BMs is fundamental to BMI (McGrath 2010; Hossain 2016, 349). Managers devise strategies based on the cognitions and perceptions (Gavetti 2005, Laamanen & Wallin 2009; Yang et al. 2018, 2). The influence of stakeholders on the decision-making of managers is given, who are the individuals perceiving and interpreting the information. Change may be initiated from the top down, however it must permeate all firm levels in order to become a collectively shared view. Therefore, a trial-and-error learning approach for BMI involving all echelons of the firm is an important organizational renewal mechanism (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 385). According to this argument the cognition of each involved individual becomes important, being a participant in the business model innovation process but also, executioner of strategic decisions, included in the scope of operative management. As argued previously, is a business model the intersection between strategy and operative management, showing the direct link between the lowest levels of the company with the highest level of the company (Wirtz et al. 2016, 38). The cognition of individuals within a firm can have a direct influence on the performance of that organisation. The perception of external changes will define what business model the company is going to adapt in order to answer appropriately to the new external environment. Hence, the cognitive component of individuals is highly important (Saebi, Lien & Foss 2017, 567) The cognitive maps of managers and employees influence their strategic decision on starting a venture and its business model design (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 390). Cross understanding is important for groups which are interdependent, need to rely on cooperation, possess different knowledge, beliefs and perspectives. These could be for example cross functional teams, task forces, product development teams, top management teams and project teams. Or in the case of business model innovation dynamically changing teams to fit the need of the innovation project's phase (Huber & Lewis 2010, 7). Cross understanding can be reached by understanding

each other's mental models through intermember communication and interactive experiences, observations of communication and behaviours, biographical information to the team members, third party descriptions, cause-effect beliefs, sensitivity to relevance, particular issues or preferences. Making the concept a group-level compositional construct (Huber & Lewis 2010, 7). Just like the concept of a dominant logic, the concept of cross understanding or shared cognition starts from individual constructs of each individuals about each individual and their mental model. Integrating all the individual models into one can be described as reaching cross understanding (Huber & Lewis 2010, 7). The model of cross understanding shares similarities with other constructs, like transactive memory systems (TMSs) and perspective taking (Huber & Lewis 2010, 8). TMSs are important for groups as it allows the establishment of a division of cognitive labour and a distribution of knowledge within the team. (Huber & Lewis 2010, 8) Establishing cross understanding in a team will lead to an improvement in communication and comprehension, reaching a common ground using the right language and choosing the right topics, improve the understanding of mental models and the mental models of each individual to suit the task more, and improve collaborative behaviour (Huber & Lewis 2010, 8-10). Collective knowledge must be adapted and current enough to face environmental uncertainties to ensure firm survival (Sosna, Trevinyo-Rodriguez & Velamuri 2010, 386).

Utilizing a company's strategic level for business model innovation, as discussed, offers a promising opportunity to address path dependent behaviour and re-evaluation of dominant logics. The following sub-chapter will consequently introduce the process of shared cognition, which establishes the link between business model innovation and a firm's strategy, explaining how a shared understanding about a business model innovation concept can be reached in an incumbent context.

2.3.4 Shared cognition process

To summarize the theoretical framework of this thesis, below an exemplary process of shared cognition will be illustrated according to 3 major steps, presented throughout Fig. 2 to Fig. 4. It will be argued the introduced problem is specific for an incumbent firm and therefore the building of shared cognition is predominantly important in their setting opposed to entrepreneurial firms or small and medium-sized companies.

It is argued that an incumbent firm, faces several external environments for which different entities are being created to provide a solution, specifically designed for the requirements. Here represented by departments A, B and C. Departments A, B and C are providing a specific solution for their respective external environments and therefore show differing input factors for the identification of business model innovation opportunities. In Fig. 2 it is assumed that an individual in department C has identified a business

model innovation opportunity to implement a business model, different from the current one that serves the requirements of environment C in a profitable way. Facing the barriers of obstruction and confusion, represented by the lightnings in Fig. 2, resulting from path dependencies and the dominant logic of the firm, as laid out in previous sections, the individual now engages in communicating and convincing other individuals in his or her department. If successful, shared cognition within this entity was established.

Fig. 3 showing the continuation of the shared cognition process. As incumbent firms usually show more than department, these departments serve different external requirements, opposed to department C. Hence, it is argued that Department A and B provide solutions that meet the requirements for external environment A and B, respectively. However, as argued during previous sections, do business model innovations require the access to company resources and capabilities which are located all over the incumbent firm. Conclusively, the business model opportunity identified by the individual in department C needs to be communicated to different departments to gain access to named resources and capabilities, needed to implement the business model opportunity, the grey sections in Fig. 3 representing the parts of the organisation the business model innovation opportunity has established shared cognition with and has access to its resources and capabilities. The problem incumbent firms face in this situation, is the differing internal as well as external input factors of the individuals in department A and B, resulting in again obstruction and confusion, resulting from path dependencies and the dominant logic of the firm. Furthermore, competitive issues for business model innovation opportunities between the departments might affect the success of shared cognition even further. Although all departments are within the same company, they still show differences in their input factors for business model innovation, increasing the difficulty of overcoming obstruction and confusion. In such situation, the power is divided between the departments, making it difficult to gain access to needed resources and capabilities.

Fig. 4 showing that even though it might be possible to overcome the barriers of obstruction and confusion in some departments, in other cases there might be bigger obstacles to overcome. In many cases, this cannot be achieved without outside support, which facilitates the process of communication and persuasion between the departments. Factors playing into the ability of a department to established shared cognition with another are overlaps of external environments or the departments themselves, through shared resources bases, capabilities or merely the geographical location of the two departments represented in Fig. 4 with the overlap of Department C and B. It is the understanding of the researcher, that the outside support of the business model innovation process and the establishment of shared cognition within an incumbent firm falls to the strategic level of the company. As it will be outlined in the findings and results of this thesis, the strategic level of an incumbent firm should be responsible for managing the process of business model innovation in the operational level of their company, specifically the

communication and persuasion of business model opportunities in-between entities of the company. How this might be achieved and how this thesis attempts to conduct research on this theoretical framework for business model innovation in incumbents will be introduced in the next chapter.

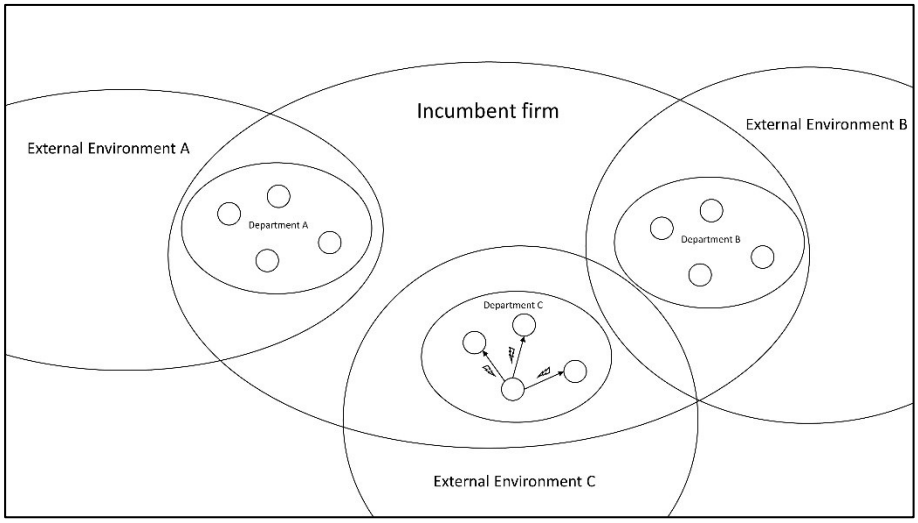

Figure 2 Shared Cognition (1/3)

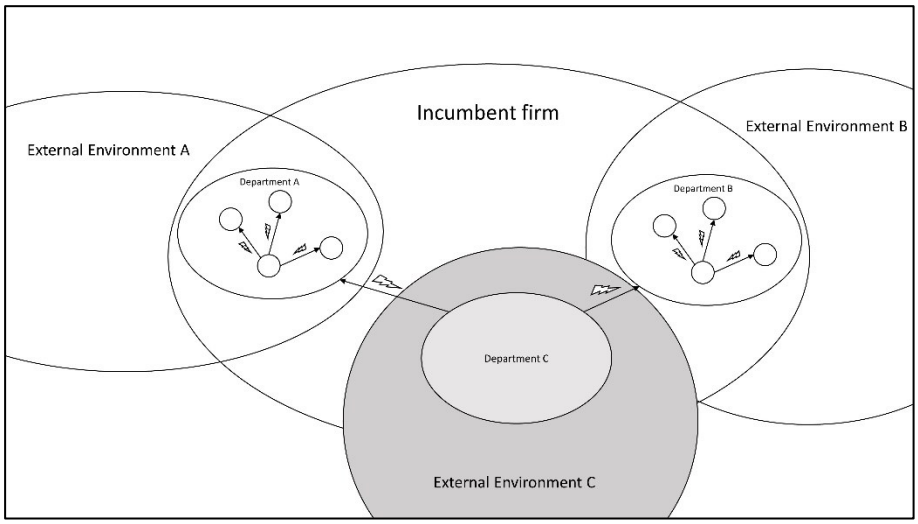

Figure 3 Shared Cognition (2/3)

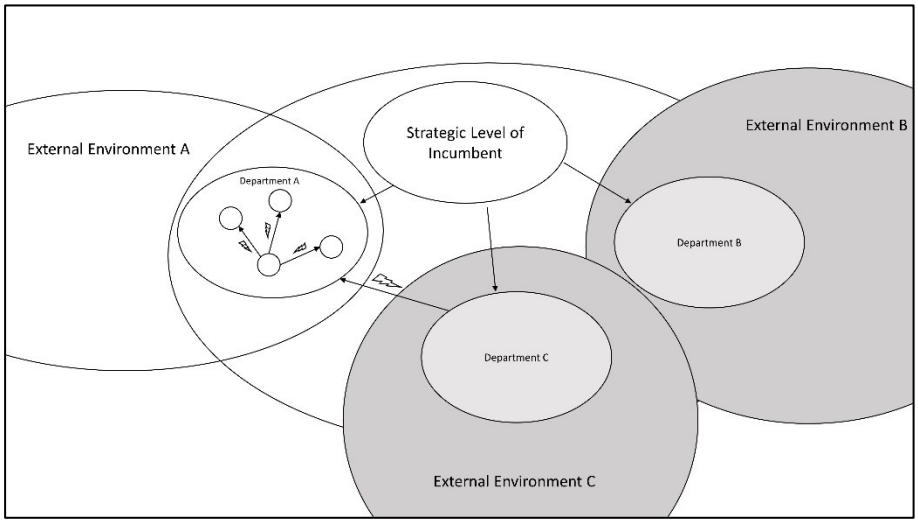

Figure 4 Shared Cognition (3/3)

3 METHODOLOGY

During the next chapters, the methodology of investigating the previously introduced research questions will be presented. Figure 5 below shows the stages of the research process and the iterations done based on each input factor. Starting with a theoretical investigation, using recent literature on the topic. Second Observational and secondary data have been collected, which was used to reiterate the theoretical framework of this study. Third, semi-structured interviews have been conducted and combined with secondary data which furthermore helped to reiterate the initial theoretical framework. Fourth, a final data analysis has been conducted of all the collected information which ultimately led to the here presented results, their discussion and given implications. How each of these stages has been conducted will be discussed in more detail during the following chapters.

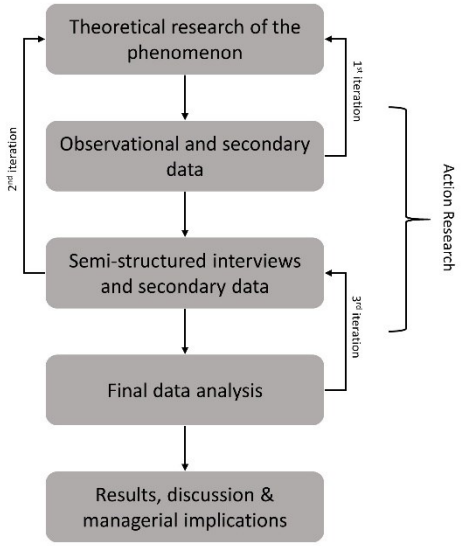

Figure 5 Research Process

3.1 Research strategy and philosophical understanding

Innovative processes and their implementation into a company's practices has been extensively discussed in the literature, already (Welter, Mauer and Wuebker 2016). On the other hand, Business Model Innovations is quite a recent topic in this matter and calls for further investigation (Zott, Amit & Massa 2011). The question on how to implement such a process for the individual case, always carries some extent of uniqueness, embedded in the differing settings of each firm, whether it being external or internal factors. A researcher must ask the question of either conducting a quantitative, a qualitative research

or a combination of them. Based on the theoretical background and setting supposed to be investigated, a qualitative research method was chosen to be more appropriate. As each innovation process is different from another and the internal and external factors of an organization having a big influence, a qualitative approach allows to investigate the single situation at a time and assess in greater detail how the innovative process in that company is established and which tools can be used to support the process. Allowing as well to put a focus on business model innovation, which are the main focus of this study as it is assumed that a business model is a major step in the innovative process towards innovation commercialization and opportunity recognition.

When following a qualitative research approach, a researcher can choose from several qualitative research types. These choices include, amongst others, case studies, grounded theory, narratives, phenomenology, ethnography and action research. For this research an action research approach has been selected as outlined in greater detail later in this chapter. The action research approach allows to have a deep understanding of the case company and how innovations are created in the investigated department, the researcher became part of. The study from the beginning is exploratory, meaning it tries to assess how innovative processes are facilitated in practice, and which other factors are important for the process within an organization. Hence, the choice of action research is further supported, as it allows to study the case company in-depth and get a detailed insight into the practices of the case company, which are important to understand for the purpose of the research. Even though the researcher did not have any direct influence on the events, he still participated in the process of innovation, giving him the opportunity to learn and observe the positive as well as the negative sides at the time of investigation in the department.

When it comes to epistemology and ontology, which is an important topic to discuss when conducting an action research, as the subjective nature of the research approach inclines, this research is following a moderate constructionism understanding (Järvensivu & Törnroos 2010) This understanding acknowledges that there are multiple perspectives of knowledge and truth and that truth is established through dialogue, critique and consensus of different individuals. Therefore, to create new useable knowledge several perspectives have to be taken into account to create a truth (Järvensivu & Törnroos 2010) This understanding is fitting very well for the research purpose, as an innovation is in a majority of the cases created by more than just one individual (Drakopoulou Dodd & Anderson 2007; Hill et al. 2014). Conclusively, the interactions need to be investigated, which can only be reached by collecting communication, critique and consensus throughout the research process.

Finally, this research follows an abductive research approach as introduced in Järvensivu & Törnroos (2010). Being a mixture of induction and deduction. Conclusively the research process started with a strong inductive approach, leading the researcher to do

research on the topic and forming an opinion by himself. Afterwards gradually including data from the findings and creating theory from it, turning the process into a more deductive approach. This research logic goes hand in hand with the research strategy introduced during this chapter, acknowledging that each case is different and needs in depth analysis before a "right" answer can be given. The abductive approach will further be discussed during the chapter on data analysis, being incorporated through a type of conceptual leaping process. The thesis tries to capture process data to construct a social reality and knowledge through the researcher. (Cunliffe 2011) To answer the question why to take the perspective from a process point of view, is that everything is a process of activities or generally of change (Rescher 1996). Therefore, following this argumentation Business Model Innovations are a bundle of processes and actions taken within these processes. This is in line with the understanding that an innovation is created in a social interaction between different actors. Social interactionist theory is taking this perspective on innovation and that truth is being created by the interaction of different parties (Drakopoulou Dodd & Anderson 2007; Hill et al. 2014). It is also assumed that the process is affecting the continuous behaviour, growth, alteration and change of the individuals participating in the process. Hence, relational ontology should be considered here as one understanding to understand the perspective the researcher takes, next to the moderate constructionism proposed previously. Relational ontology states that everything exist through its relations to other things (Langley & Tsoukes 2010, 3) The understanding of the process carries valuable insights of the phenomenon studied, the explanations to the phenomenon are embedded into the context in which the phenomenon takes place (Welch, Piekkari, Plakoyiannaki & Paavilainen-Mäntymäki 2010). This understanding can provide conceptualized explanations to how a company can change its business model and develop competences to do so under different requirements than the company's history.

3.2 Selection of the case

The selection of a qualitative study does not have to be chosen randomly as the reason for a qualitative study is of theoretical nature. Conclusively, a case is being chosen that replicates the theory introduced in this thesis or is experiencing the phenomenon in question, trying to make sense of the phenomenon in their context. (Eisenhardt 1989, 537) The criteria for choosing the company should conclusively be based on the phenomenon in question. Hence, 3 criteria were deducted to fit the choice of company in place.

1. A company that plans to change and/or follow business model innovation processes.
2. A company that structures or is trying to structure their business model innovation processes.
3. A company that uses/wants to use business model innovation tools or understanding to execute the innovation processes.

The final choice of a case company fell on a cargo handling machinery provider for ships and offshore as well as other players within the maritime industry. Furthermore, the case company is owned by a parent company, holding a portfolio that serves cargo handling machinery and related services for maritime, port and road logistics. The maritime sector is currently struggling with a recession and lowering demand for their products and services. Most of the companies are either going out of business or are being commoditized. This environment requires the company to change its ways of doing business. The original key competences of the company, being the cheap production in China, the established partner networks and the extensive mechanical and engineering expertise have all lost, at least some of their value to the company. Especially, the rising production prices in China and the changing industry structure, enabling more players to build up partner networks for themselves, put the company in the position to have to change. A best-case scenario might be to find a new business model or new product or service they might be able to monetize, keeping the company competitive.

Already, the company has previously been able to change its business model successfully opening a new customer segment to the company. The market structure of the industry is very conservative, and the value exchange went from one adjacent value chain level to the next without any changes for a long time. When the market more and more commoditized towards higher levels of the value chain, and the most powerful players in the market, the race for price efficiency increased, endangering the high-quality business model of the case company. The step the company took was to change the customer segment from the original customer towards the customer's customer selling them their value proposition directly. This was successful as the value proposition offered was only indirectly benefiting the customer. Whereas directly affecting the customer's customer, supporting them to do their everyday job with more ease.

The value proposition offered was a lower amount of operational costs for running their business for a higher initial investment cost for producing the used assets. This meant for the producing customer the costs were going up, which increased their prices. In a highly competitive market this was not welcomed. But on the other hand, lower operational costs would benefit the customer's customer and parties that would own the assets and provide them for the out carrying party, as their costs could be lowered by this value proposition.

This narrative illustrates how a business model can be changed successfully and has been especially changed by the company used for this research.

Currently, the case company experiences another external pressure to change their business model, current market trends push the whole industry towards digitalization, automation and the Internet of Things (IoT). The company, originally being a hardware-knowledge provider, does not have a lot of experience with digital services or products. Especially, the monetization of these products requires a different approach and a different kind of business model to transfer the value to the customer and back to the company. This development demands the company to change their business model yet another time. How this will be investigated in this research and what data it will be based on will be introduced during the next chapter of this thesis.

3.3 Data collection

3.3.1 Action research

The first method used to collect empirical data on the change processes in the company is action research itself. This method requires the participation of the researcher in the environment of the phenomenon, requiring intensive resources from the researcher especially time and attention. However, this method allows to develop trust with the different actors and produce in-depth results through the long-term involvement with the people, processes and developments ultimately aiming at invoking change of the phenomenon (MacDonald 2012, 35–36).

The action research data collection started the first day of employment with the company on the 2nd of October 2018. The researcher was employed as a part-time employee with the job description “Designer – Digital Business” in one of many departments of the case company being part of a newly founded Customer Innovations Team. This position included the participation in an innovation process the company was organizing with an external consulting company, called “emerging business accelerator” (EBA). This position allowed the researcher to experience first-hand how the department attempts to come up with possible changes in their company. Hence, which new products, services or business models they could use to face their changing external environment. At the same time, later during the employment, the researcher was involved in the planning of a structured process, that would incorporate the innovation process into the company’s structure using business model innovation tools and understanding.

The researcher was employed for two to three days a week in the company, however the participation in each meeting, related to the EBA was the target, which was necessary

to collect in-depth action research data that would show the innovation process of the company without any gaps also after the initial innovation process, the participation of the researcher in the planning meetings was targeted, to ensure the involvement and information collection related to the topic.

Also, outside work activities, like Christmas parties, lunch and coffee breaks, after work talks and shared rides home were observed which held important information on the opinions of the different actors, inside and outside the organized change process of the department. The total duration of the investigation was 15 months, where the EBA-process took up the first 3 months, while the rest was used to investigate the changes from the results and follow-up observations of the participants involved. The outside work activities were largely important, as the private environment they were held in, opened personal opinions on the process and the company's policies, related to innovation at large.

This type of information is hard to gather, without being part of the organization for a longer duration of time and gives a very good perspective on the phenomenon in question. It especially gives the researcher time to identify the important persons for the phenomenon, on which a focus can be laid during the process. Hence, the action research data collection allows to change the focus during the process of data collection, leading to a refinement of information the longer the participation of the researcher lasts.

An action research approach combines different methods of data collection, such as archived documents, presentations, videos as well as interviews, questionnaires and participant observations. (MacDonald 2012, 34–35) Conclusively, the evidence may be qualitative, quantitative or both. (Bloor & Wood 2006, 70) This means in turn that data can be better triangulated to provide stronger substantiation of constructs and a higher synergy effect (Eisenhardt 1989, 538; Dooley 2002, 341). To answer on all the research questions and their sub-questions of this thesis, a combination of data collection methods has been used.

Finally, when collecting data through action research, ethical issues need to be considered, applying criteria defined by Winter's article (1987), who defined 6 issues. First, every subject to data collection needs to be consulted in advance. Second, every participant needs to be able to influence the research done, third the research process needs to be open and transparent, fourth when collecting observations data and other forms of information, permission needs to be ensured for its usage. Fifth, when using individual opinions or description of certain issues, they need to be negotiated with the individual before their publication to avoid misinterpretation. Finally, all information collected needs to be kept confidential to ensure no bad aftereffects hit the participants of the research. (MacDonald 2012, 45–46)

3.3.2 Interviews

To find answers on the research questions, interviews have been conducted with participating individuals in one of the processes. These interviews helped to answer on the questions of “what” and “how” especially. The interviews have been conducted face-to-face and in a private environment with only the researcher and the interviewee present. These private interviews enabled to get deep insights on the phenomenon without any bias from other individuals what might have been a problem if group interviews would have been chosen. (Eriksson & Kovalainen 2008, 78–80) There are different types of interviews, being structured, semi-structured and unstructured. Structured interviews are more commonly used for quantitative studies whereas semi-structured and unstructured interviews are more often used for qualitative studies. Considering that this research is explorative in nature, semi-structured interviews have been chosen. The questions have been deducted from the observations made during the period of working in the company. The method of observation will be introduced during the next chapter. Semi-structured interviews allowed the researcher to flexibly adjust the questions according to the development of the interview and the topics opened through the prepared questions. This flexibility can improve the findings especially when investigating a case that holds some sort of uniqueness. The interviews have been conducted after the collection of data through observations in order to clarify questions that arose during the engagement with the observational data. This enabled the researcher to properly prepare questions for the semi-structured interviews that would lead the interview in the direction needed. By having a first engagement with the data before the interviews, it helped the researcher to refine the framework and the literature behind it. Hence, the questions asked were targeted specifically towards the framework and the literature that fits to the collected data. Also, the choice of interviewees could be adjusted, as the first engagement with the data allowed to identify key persons of interest, who would have something important to say for the topic. Additionally, the interview questions were adjusted to the individual to reach the highest outcome possible in terms of depth of data.

Interviewee	Work Title	Years in case company	Duration of Interview	Pages of Transcript
Interviewee 1	Senior Naval Architect	24	01:20:49	28
Interviewee 2	Digital Analyst	2	01:01:48	21
Interviewee 3	Naval Architect	16	00:57:58	22
Interviewee 4	Manager, Offering Development	22	00:56:37	28
Interviewee 5	Cargo System Analyst	5	00:58:05	25
Interviewee 6	Technical Manager (Lashing)	15	01:04:16	22
Interviewee 7	form. Director Customer Innovations	12	00:57:59	22
Interviewee 8	Technical Manager (General Cargo Vessels & hatch covers)	14	00:56:48	20
Interviewee 9	R&D	25	00:55:52	15
Interviewee 10	Consultant - Master Mariner	none	01:08.02	22
Interviewee 11	Director - Customer Solutions	20	01:02:17	26
			11:20:31	251

Table 1 Interview Participation

11 Interviewees have participated the semi-structured interviews, all being involved in the business model innovation processes of the case company. Table 1 above, shows the work titles of the individual interviewees, how long their interview sessions lasted and how long the transcripts of each interview have been. For privacy reasons, the interviewees' names have been kept confidential. Table 2 in appendix 1 presents the operationalization table behind the conducted semi-structured interviews. Connecting the posed questions during the semi-structured interview sessions, to the research problems, its sub

problems and themes and ultimately linking them to the research questions of the study. The aforementioned list of interview questions can be found in appendix 1 as well.

The interview data collection was important to complete the observational data as observations are exclusively based on the researcher's perspective. Adding interview data, helps to triangulate the findings with the individuals involved in the phenomenon. The interviews as mentioned before having also been prepared after a first engagement and iteration with the observational data. Hence, the assumptions of the researcher were included and checked with the individual the assumptions were made about. This gave the individual the chance to clarify situations add emotions and just offer a greater insight into the situation from a different perspective.

3.3.3 Participatory observations

The second mode of data collection used to create this thesis were observations, which have been collected in the form of a "Field Diary". Observations can help to identify behavior of individuals as well as the effect of a process onto the individual. The beliefs of an individual and the actual behavior can differ greatly, hence the method of observation is suitable to check what people report and what their actual actions tell.

Observation collects empirical data by human, mechanical, electrical, or electronic means (Eriksson & Kovalainen 2008, 86.) The data collected offers a short but intense glimpse into a reality of a phenomenon and how it affects the people it touches on. (Abrams 2000, 2–7) There are structured and unstructured observations, for this study an unstructured method has been used. The observation was looking at all phenomena that might influence the innovation process of the case company. Therefore, no in-depth specifications have been set that limits the perspective of the researcher. However, it must be noted that a preliminary literature review has been conducted before the actual start of observational data, which helped the researcher to identify possible phenomena in the process. Observations could be conducted in disguise. However, the researcher decided to reveal the data collection to his peers. Especially in the light of upcoming interviews with the individuals in the process, they should not be caught by surprise if the researcher knows information, they did not think he knew. Ethical issues with the collection in disguise could also be minimized at the same time.

The observations were collected in a participatory way. The researcher participated in all meetings related to the innovation process as another employee. This added an understanding of the environment the observed individuals face to the perspective of the researcher, which helped him to understand the context around the innovation process better. Especially, as every company and industry create their own unique environments for their employees this was important to understand the reactions and actions taken by the

individuals in this study. This form of observations adds extensive personal reflections to the research, which can be found in the created field diary. (Erikksson & Kovalainen 2008, 86–87)

The object of the observation can be actions, behaviours, verbal communication, non-verbal communication, what happens and what not happens. Therefore, it can be argued the researcher is observing the environment from a social and human perspective. As the observations are collected from humans, it can be considered as subjective. Hence, the interpretation of the researcher is affecting the interpretation of the observational data. Reliability is one issue that needs to be discussed when using observational data, as the insights and conclusions should be applicable in other settings as well. (Abrams 2000, 19–20)

Even though the observational data collection started in an unstructured way, the process became more structured the longer the data collection endured. As mentioned above, the data was used to refine the focus of the study, according to the insights gained along the process. This was important to improve the depth of the data collection through this method. The narrower the focus becomes, the deeper the insights will be (Abrams 2000, 66–68)

3.3.4 Secondary data collection

Secondary data has been collected throughout the research process. The majority of the secondary data has been private information only accessible to employees of the case company. However, some of the information has been publicly used on websites and for the interaction with business relations. Especially documents and presentation material that were handed out during innovation related meetings and discussions have been collected. Furthermore, files that employees created to show their opinion concerning the organization and its innovative process have been targeted for collection. Also documents that were used prior to the entry of the researcher in the company have been collected on availability and access to them. The secondary data has been very important for the research process, as the theoretical background of, for example, external consultancies were explained in these documents or employees addressed issues for changing the process of innovation and possibly even offering suggestions for improving the innovative capabilities of the case company. It could also be used as a basis for mapping out the process steps that were taken during the practically observed innovation process.

Additionally, secondary data sources were important, as they explained some of the decisions taken by individuals. Some of the decisions made by individuals or their opinions did not always develop face to face with the other participants and could therefore not be observed. Therefore, the reasoning behind some decisions and opinions, can be

found in the pdf. - files, presentations and other documents they have used to form their opinion and consequent decisions and actions.

As a closer look was placed on the process of business model innovation, it was important to understand the theoretical background behind it, so the guidance of managers, external consultants and others could be followed and applied for the observations. Like this, actions, emotions and behaviours of individuals could be linked to the progress of the process and hold valuable information on how to structure and implement the process within the whole organization.

3.4 Data analysis

The analysis of the data was conducted in several steps following the Gioia-method (2013). Starting with the analysis of the observational data. Even though the data collection was still ongoing, it has already been started to make a first analysis of the data at hand. After the structured innovation process facilitated by the external consultancy has ended, the data has been analyzed to identify first order concepts. Based on these concepts, the literature has been adjusted, to better fit the phenomenon. Consequently, the observational data collection has been adjusted to follow-up on the result of the innovation project and to create a semi-structured interview guide, that leads the researcher towards the 1st order concept.

After conducting the interviews with the individuals who participated in the innovation process, he compiled the data again, analysing a second time the 1st order concepts. After completion of the data collection, this process was followed a third and last time, leaving the researcher with a final set of research concepts. After the identification of the 1st order concepts, they have been summarized into 2nd order themes, giving the data more structure. Finally, the 2nd order themes were compiled in dimensions, describing the constructs found in the data. The first 3 rounds of iteration based on the data and consequently returning into literature can be described as conceptual leaping. (Fuerst 2017, 117–121) This method was the basis for the iteration phases introduced during this chapter. The process of conceptual leaping usually includes 4 steps:

1. Theory construction,
2. Engagement with the data,
3. Deliberation and
4. Connecting to literature

This process allowed the researcher to fit his research into the context given by the case company and to follow the topic of most interest in the setting. A researcher engaging

in action research data collection, especially observations, can sometimes not know what he/she is going to find during the data collection about a phenomenon in real-life context. The circumstances the researcher faced in the company were not as expected, and consequently did not fit the literature he was using prior to the start of the data collection. Hence, it was necessary to adjust the theoretical background to match the setting the research was conducted in. Conceptual leaping allowed to do exactly that, while on the same time continue with the data collection. Another important comment is the feasibility for the organization. By adjusting the topic to the most interesting or the setting a better outcome for the company can be reached as well.

3.5 Evaluation of research

Naturalistic studies are often subject to criticism of how their research is conducted and whether the findings are to be trusted. Usually the concepts of internal validity, external validity, reliability and objectivity are used to establish trustworthiness. The concepts are trying to establish that the study conducted represents the truth. Are the findings what has happened in the research context and were the applied methods able to collect the necessary information to provide a solid representation of the phenomenon. Second, the applicability of the findings is under investigation, trying to establish whether the findings can be applied in other contexts as well or if they are only applying for the context of the study. Third, the possible repetition of the study and if it would result in the same conclusion is important to answer. A study conducted in the same context with the same subjects, should wield the same result when repeated. Finally, a study needs to show neutrality, the results should not be based on personal perspectives, interests and motivations but should be a result of the subjects and context of the study itself.

This thesis will use the concepts of Credibility, Transferability, Dependability and Confirmability as introduced by Lincoln & Guba's (1985, 289–331) book who are arguing in favour of the application of different criteria for naturalistic studies, that better fit their nature. In the following section the above-named concepts will be discussed, and it will be established how this investigation fulfils these criteria. Starting with credibility. Credibility trying to show that the results of this study can be trusted and that they are in fact a creation of the different realities involved in the phenomenon. First, the study has been carried out over an extended period. The researcher has spent 15 months with the subjects of his study, allowing him to become part of the organization and the team that was directly involved with the phenomenon in question. This long engagement period allowed the researcher to understand the culture and context of the subjects, providing him with valuable contextual information, helping to understand actions and reactions of the studied subjects. Furthermore, it helped to identify what information was credible and

important for the issue under investigation. Often, subjects might misunderstand questions, motives and other research related issues, which were able to be excluded, due to the understanding of each individual and their background. Finally, the extended period of the investigation allowed the researcher to establish trust with the subjects. Working alongside them, helped the researcher not only to learn about the context first-hand but also to show the intentions of his engagement with the subjects. Specifically working with the subjects on a regular basis on a variety of tasks, helped the researcher to also get an insight on a wider scope of topics that are touching on the research topic. Furthermore, as the final interviews have been conducted in the end of the 15 month period, the interview participants were familiar with the researcher and his interests and motives, trusting that no information would be used to their disadvantage and that anonymity of the participants would be kept, allowing them to speak freely about the researcher's topic.

During the prolonged engagement with the case company, the researcher kept a journal, taking notes about his observations, throughout the whole investigative process. Keeping track of observations in such a persistent manner helped the researcher to learn about the work itself as well as the problems that individuals face in their contexts. Often, initially made conclusions and observations needed to be revised, during the process, as more and more information entered the stage. Persistently observing and keeping track on these changes allowed the researcher to arrive to his conclusion, which has undergone consistent changes. Additionally, files, documents and presentations have been collected to support the observations made during the investigation, which additionally helped to understand the phenomenon under investigation.

A possible way to show that a naturalistic study is credible is to show triangulation. Triangulation in naturalistic studies can be shown by using different sources, methods, investigators and theories. As mentioned above, this research is based on different sources of data. A total of 11 interviewees were included in the interviews, whereas the observations reached even further than that. However, for the interviewees, the interpretation and results of the research have been presented, allowing them to influence the final outcome of this investigation, which is argued at this point to be a triangulation of sources, especially in combination with the made observations and collected secondary data, which reached even further than 11 subjects.

Observations in form of a research journal, Secondary Data in form of files, documents and presentations as well as semi-structured interviews with transcripts and recordings have been compiled throughout the investigation. Applying different methods of data collection allowed the researcher to collect information on many different perspectives of different individuals in the case company. This also allowed to broaden the scope of this investigation, as different layers of the company involved in the phenomenon were able to be included and provided a variety of lenses onto the topic.

As the investigation in the case company endured for 15 months, the initial research purpose has been revised several times, shifting attention to a variety of different theories, that might provide the most credible answer for the conducted research. Coming from a broad concept of dynamic capabilities, over entrepreneurship and strategic entrepreneurship to business model innovation and its link to a company's strategy in the context of an incumbent firm. These shifts show that theories have been triangulated and negative case analysis have been conducted during the research duration, which included the change of research subjects and their opinions. While engaging with the actual phenomenon, in person, over the extended period, different subjects drew the attention of the researcher to be important for providing an answer on the investigate phenomenon, which ultimately resulted in the choice of interview-participants. However, it needs to be mentioned, that not all individuals, important for the phenomenon could be interviewed, due to accessibility and other factors. Furthermore, individuals included in the research process were able to revise their statements with more information and better understanding of the matter. This provided the researcher not with first opinions and impressions but long-term learning outcomes of the individuals and their opinions.

All in all, the above sections show that the study shows arguably credibility and the results offer an adequate representation of the studied reality of the different involved subjects. Prolonged engagement, persistent observations, triangulation of sources, methods and theories, negative case analysis and continuous member checks all contributed to the process of finding the most suitable answer on the phenomenon.

The Transferability of this study on the other hand is a different question. As this investigation was conducted in a very specific company context, in a specific industry with specific individuals, these preconditions might make it difficult to transfer the results into different contexts. However, it is argued at this point, that due to the credibility, established in the previous section, the context in which the study has been conducted, as well as the detailed description of the research process allow other researchers to replicate the study in different contexts with different subjects. All the information used to reach the conclusion of this study have been documented and are readily available to be used for further investigation, providing all means to replicate this investigation in the same of different contexts.

The matter of dependability of this study is difficult to answer, even though it is argued, that there does not need to be a separate discussion of dependability if credibility has been established prior (Lincoln & Guba 1985, 216–317). However, an inquiry audit could prove the dependability of this study. Such an audit would allow an independent third party to approve the results and conclusions made, using the same information that has been available to the original researcher and repeat it in the same or a different context. Even though, such an audit has not been conducted for this research, yet. The researcher is providing all the necessary information and all the used information for this

thesis and invites to audit the results and conclusions. Hence, it is argued that even though dependability is not established at this point, the researcher calls for the test of this study's dependability which is the next best solution. Not proving this research's dependability but to provide the means to do so.

Finally, the topic of confirmability needs to be considered. Confirmability is asking whether a result can be replicated if another researcher is presented with the same information. Just like dependability, all a naturalistic researcher can do is to provide the information used to reach the results and conclusions of the research. Hence, raw data, analysis and synthesis products, information on the research process and other information important for the process of reaching the results and conclusions, as outlined during the credibility section, should be provided for the interpreter. The way this thesis presents the results, offers interpreters a representation of the research thought process, showing how he reached the conclusions form the results and the data used. Furthermore, providing the data for the audience to allow confirmation of the results.

After introducing the methods used to conduct research for this thesis, the following section will discuss the results that were identified throughout the research process, starting with the context of incumbent firms and their relation to the in this thesis introduced concept of shared cognition. Secondly the results will be completed by introducing the results concerning process design for business model innovation in an incumbent setting.

4 RESULTS

4.1 Context of incumbents and relation to shared cognition

Reaching shared cognition throughout a business model innovation process is addressing a variety of different topics, which reach from organizational process structures, over communication to organizational strategy. With shared cognition it is addressed, how an incumbent organization, that has already developed a dominant logic, with its inherent routines, procedures, capabilities and shared company memories, that decide on which future path the organization is going to take. This dominant logic will enforce behaviour that supports the artefacts built up over the past. Therefore, engaging in projects related to renewing a company's business model it requires the modification of named artefacts of a company's logic. Such modifications, however, need to take into account that a considerable effort will be required to communicate within the company, restructure and develop organizational processes and even address company strategy formulation, as will be outlined during this result section. A special focus will turn to interdepartmental issues as well as inherent complexity when it comes to business model innovation. The larger an incumbent grows and the longer it exists, it might build up separate ”silos”, which in the case company will be described by functional and spatial departments that create the development of named ”silos”. Functional referring to the tasks and expertise within a department. Specialised departments deal with certain tasks, products or customers, leading to a topical separation within the organisation. Spatial ”silos” on the other hand are describing the international status of the case company, running departments globally, such spatial separation leads to the development of silos due to low proximity and interaction between individual employees, who tend to interact with proximity individuals. Each of these silos will develop their own logic of how they fit into the overall logic of their organization, leading to individual conflicts between the business model innovation projects and each affiliated silo throughout its process. Nonetheless, due to the diverse requirements of business model innovation projects, capabilities and support from different departments might be required, making their inclusion to the project essential. This section will be separated into 5 sub-sections outlining the results of the data analysis. Communication, process & structure, interdepartmental issues, strategy and complexity.

4.1.1 Internal competition

One of the challenges for incumbent firms, seems to originate out of competitive factors when working with business model innovation projects. These factors have different root

causes which will be discussed in the following section. Generally, the competition in the case company seems to arise out of 3 main reasons:

1. Inter-departmental competition for BMI projects
2. Competition between R&D and BMI
3. Competition between BMI projects

Starting with inter-departmental competition for BMI projects, this shows to be a common occurrence in the case company, especially in the development stage of such projects, once they start involving a growing number of departments for the development of the project. Internal development projects in the case company are competing for attention of top management. Projects appearing smaller to management, receive less attention even though they might be further in their development than their bigger counterparts. The way they receive this attention is not always clear but seems to be related to different factors like departmental power in the organization and alignment with the current business models applied in the case company.

"The basic question, basic challenges there with that, that whose business is this?" (Interviewee 1, 45:17)

Another competitive factor, as above quote shows, within the incumbent case company, is the competition of involved departments for the association with the project and the ownership over the project once it is done. Departments as well as sister companies are negotiating before completion of a project, who will benefit from the generated income of the project. Current performance evaluation structures require each department to find their benefit from the BMI project, resulting in clashes between the involved parties for who gets what, from it. This applies as well for reputation gains from the project within the organisation. Generally speaking, who may claim ownership over the project and advertise it within the organisation as theirs.

"More and more we are talking about the cooperation between department 1 (new-building) and department 2 (after Sales) or department 3 (GLS). ... those should be linked together ... If you just look at that one part of that, you lose something. I don't know which side will lose, and who will gain but you will lose anyway if you are not able to measure that as one common benefit or value or revenue. That should be the big internal obstacle that we have." (Interviewee 4, 36:41)

BMI projects are interdepartmental in their development. One big obstacle to this development is the competition for generated revenue and other benefits by the involved

departments. This challenge needs to be overcome, creating an understanding of shared benefits. However, negotiating this shared benefit requires a structure that decides how it is shared between departments. Current R&D project do not require such negotiations, as they are most often developed department internally. Inter departmental competition goes so far, that projects are blocked and put on hold, as departments are not able to find a solution for shared the created benefit. Both sides being afraid of missing out on the benefit, neither of them drives the project forward. A structure needs to be found that negotiates how benefits are shared in-between departments. Or a new company structure needs to be created that supports benefit sharing better, when cooperating inter-departmental or even inter-organisational.

”It's completely stupid ... other guys also have the same thing. If you go forward with this segment, like who is handling you have this danger that they are gonna kill it, totally. Yeah, because either way it doesn't fit with what they are doing. Or is not doing ... all the protocols and processes.” (Interviewee 5, 50:38)

Once reaching outside the own department, competition is arising, either because the project does not fit into the way, things are done in the other department or because it is not compliant with the protocols and/or processes. There is no unified process that BMI projects are following. Trying to navigate through the established structure without facing strong company inertia is next to impossible. Each department has developed their own practices and rules for their business line, crossing these lines results in conflict that endangers BMI progress and, in some cases, even termination. The previous perspective taken, that once crossing departmental limits, conflict arises is supported by other interviewees who see the same challenge within the case company. They report on ”companies inside the company”, meaning that in a large incumbent firm, departments become more like autonomous entities, that have their own procedures and rules, supporting the inter-departmental competition and inertia. Receiving support for early stage BMI projects is difficult to establish, the question of who will own the project is predominant to asking for support. Required departmental support is linked to a return for the commitment. If the return is not found, the project will not receive the attention required for further development. Especially because BMI projects need several iterations for reaching their final state, benefits cannot be easily shared but develop over time. Inter-departmental competition when it comes to BMI-projects arises out of the current business model of the company and how they measure each departments success based on the given model. BMI projects, which challenge the way a company does business, applies a different logic of success, leading to conflict between departments. As the quote above shows, are other departments not interested in supporting such projects as they will be worse in overall company comparison, if the new concept is developed without receiving any sort of

benefit in return. Therefore, it can be argued that the current business model is supporting the competition between departments and hindering BMI development progress, laying grounds for non-cooperative behaviour.

”Working across company levels for example, and dealing with a different company, like I said, different goals, different targets. In my opinion ... it's all the same Corporation ... there should be a way to combine strengths ... no politics would be involved ... it's difficult to achieve something across different organizations because it's silos as well. ... maybe the ownership things ...” (Interviewee 10, 43:03)

Currently, BMI projects experience a strong competition for the ownership in their possible success, resulting in postponement or cancellation of the project, even though individual employees see the benefit if competition would be replaced by cooperation. Especially within the own organisation and affiliated companies. The competition between departments in the organization does have a point, resources should be funnelled efficiently, however the question on who is deciding on the projects and which ones to focus on, is still open for debate. The current way projects are compared with each other is only enhancing the competition between the departments. Especially the behaviour of running BMI projects ”under the radar” is a common attempt to give projects a chance to develop before they are evaluated by an external committee.

The second reason why competition arises within the incumbent case company, is the competition with R&D projects, which are not at all or only partly disconnected from BMI projects.

”... from the hardware side if there is clear customer case ... And then I have several of these ideas to R&D. And it always bounced back because it was not a million Euro business. ... But then by doing that investment, you change the whole industry standards.” (Interviewee 1, 1:14:40)

With the company not having an established BMI process up and running, new projects are mixed with general R&D projects. As BMI projects tend to have larger implications for the company, customer and industry, these projects are not comparable applying the same performance metrics that are used to assess R&D projects with one another. This mixture of projects within the case company increases competition between innovation projects in general, giving incremental change the upper hand, being favoured by evaluation methods.

”... we are in the red numbers. Yeah. Now we need short-term money ... If we leave here guys who are doing innovations for next 20 years ... they don't want any innovation

they only want short-term cash ... It's not business of today ... we still have innovations, but we cannot have any innovations department or innovations manager at the moment." (Interviewee 3, 44:14)

Short-term projects are competing with long-term projects due to the current situation of the company. As business is down, quick wins are desired, which is favouring R&D projects, which can quickly show the impact on the current business model. Changing the business model or creating a new one altogether requires bigger changes and possibly longer time investment. R&D does have established ways to evaluate their projects however, these evaluation metrics are based on the current business model the incumbent is running. Consequently, the mode of evaluation favours R&D projects over BMI projects, leaving them in an inferior position to receive funding.

"... it was maybe up to me that how much I sponsor this there was no other sponsor for this, and that is a little bit, but I know that the management is focused on running the business. And these kind of new things, new processes there are not so much bandwidth for that." (Interviewee 7, 39:06)

BMI projects are not first priority of management. Resources are allocated elsewhere, more centred around the current business model. This focus on projects that are close to the business result in resource allocation towards R&D projects, that support the logic of the current BM, leaving BMI projects to compete for an even smaller pool of resources available for their development. Going so far that departments need to sponsor such projects themselves, without receiving higher management support or funding from R&D.

"... too many projects ... it was difficult to have the progress. ... we should have been focused on one thing at a time." (Interviewee 4, 09:30)

The third reason why competitive factors arise in the case company is related to competition in between BMI projects. BMI projects also compete, there are many opportunities available, however focus is needed to drive one or some of the projects forward. Within the investigated department many projects have been pursued at the same time, leaving not enough time for any. Therefore, next to departmental competition for projects, competition with R&D projects a third competitive factor comes into play. BMI projects competing for superiority. This competition between BMI projects is especially dangerous as not progressing with ideas, creates suspicion within the organisation, whether the project is worth pursuing. An interviewee reports that dragging on a project for too long, without progressing will increasingly hinder the acceptance in the whole organisation. Hence, competition between BMI projects is an important one to consider as it can hinder

BMI as a whole. BMI projects are currently in competition with each other, competing for attention, time and resources for their development. However, as the company does not have a structured evaluation for early stage BMI projects, that allows the comparison of these projects, disputes over the resources are not reaching a conclusion, leaving many projects on the side-line.

”It's very complicated here. Maybe it could be the idea ... but then ... not very much like pushing it, I mean it seems that the people in general have too many works. So, the guy who is looking after a BMI project (refer cooling), he's also looking to three four other projects here, while he also runs every day so I don't see how that setting can push it?” (Interviewee 5, 24:09)

Employees involved in BMI projects in the case company, are swamped with ideas to pursue, even though they might have a good BMI project, the time is not there to push it forward, as there are several other projects ongoing the same time, on top of everyday business tasks they need to fulfil on a regular basis. Projects are in competition with each other and how much time the project owner has available for each. Only some of the BMI projects available can be developed further, which is depending on a competition for the available resources. Hence, the number of projects needs to be funnelled down into the most promising ideas. Which is currently difficult within the case company as there is no structured evaluation process available that allows a comparison of BMI opportunities.

”Somebody needs to decide, at some point, where is this team with this stuff. And if you have five teams, communicating their own way of working. Then there's no way to compare where they are, what actually makes sense. and, you know, so it... there needs to be a standard, otherwise it's not comparable.” (Interviewee 10, 24:28)

Within an incumbent firm, several BMI projects arise simultaneously, this requires a structured way to compare these with one another. Without having an agreed-on process how these projects are evaluated against each other, competition will be based on unrelated factors and possibly waste resources on projects that are actually inferior.

”That of course goes back to manager, how does he or she allocate the time that people are having. So I guess it should be some sort of combination of. Again, little bit pushing, but on the other hand, it should be like, pull from the person's perspective that I want to do something new and I see some, some value in this and, yeah, and I feel that this is good for our customers and this is good for our business.” (Interviewee 11, 11:17)

In general resources are scarce in incumbent firms for several reasons. However, one of them is of course how managers allocate time for their employees. Which is when it comes to new BMI projects, it requires not only a permission from the manager to participate but also an intrinsic motivation to participate. Hence it is a time allocation matter as well as motivation allocation issue. General resources scarcity seems to be a topic in the case company currently. With the industry struggling currently, financial resources are difficult to gather. Employees report, that concerning BMI, the attempt to find projects already started in the past when human resources and supporting tools were still missing in the company. Whereas today it seems to be more a financial issue that prevents BMI projects to be developed appropriately.

”We need to somehow control that. How many this kind of leads you can have same time going on. That's the challenge but then, this, this could be also possible that everybody can have an idea, start doing this. And when we call live with resources for that reason we need maybe some steering group, how we allocate resources? Either we park it, or can you run this little bit slower but if we have a so many things running little bit slower than nothing comes out, but definitely in the beginning, as we had 18 things.”
(Interviewee 7, 29:39)

Having too many BMI opportunities floating around within a department is difficult as each of them will compete for attention and resources for its own development, slowing down the speed a BMI project can be driven forward. An interviewee reports, that having a big amount of ideas within the department required a steering group, which would decide on a focus for the opportunity portfolio. Without giving a focus and deciding a direction, no project will proceed.

4.1.2 Communication

Communication is prominently outlined by interview participants to struggle or even fail. Often business model innovation projects seem to not even be able to reach beyond their own ”silos”, not being able to communicate the concept that attracts support or agreement on its importance. Communication for business model innovation within the incumbent case company seems to fail due to four different communication errors. The differing agendas, a lack of evaluation criteria, subjective project evaluation, differing understanding due to company background. All of these challenges are interrelated, and are not always separable, but commonly they lead to the same result, a failure to communicate the business model innovation project outside its departmental boundaries.

Following different agendas when communicating business model innovation projects and opportunities outside the own department, is mentioned throughout the interviews as being one big issue that needs to be addressed.

" Having a structured way really helped us to ... find areas we have ... overlooked ... certain things we had totally forgotten. ... only thing is your mindset ... spend little time now ... think different things." (Interviewee 11, 05:04)

One interviewee mentions that certain topics are overlooked by the business model innovation team, that would be important to clarify before starting to involve individuals from outside the own department. Following a given structure would allow the team to think about these topics before running in a situation, when these topics become important. As another interviewee highlights, being prepared for presentations outside the own department, is crucial for a successful communication and gathering support.

" Templates helped a lot so understand different angle of pain. ... so many sales pitch ... in the end, ... some listener they were asking some stupid or simple question, and they didn't have any answer for that. They were totally silent, or they were answering in a very stupid way. ... then your, your whole interest from the idea would be gone. ... you will have some doubts, if they haven't thought about these very simple questions. How can I trust them?... It's good to question yourself. It's good to have a proof in any different way. ... how to share my ideas? ... it gives you some kind of knowledge that you don't see by yourself, necessarily in the beginning." (Interviewee 2, 46:20)

Not addressing issues that are essential for the listener on the other side, results in distrust, and disinterest for the business model innovation idea. Following a given agenda for this type of communication would allow both sides to prepare their expectations for what is going to be addressed and what not. Neither expectations would therefore be disappointed by, unawareness of the other party.

" I might miss some point ... they see the world differently. Am I taking on much on the technical stuff and how it helped customer, but they may be wanting to see how we make money? ... You have then those would show that ... they will know this from here. What's this section here? Yeah. Can you open it up? ... you have all the steps to kind of help their attention to each and every one of the listeners at some point." (Interviewee 5, 11:55)

Naturally, presentations are prepared from the presenter's perspective. However, offering a common agenda for both sides, even during the presentation allows to address topics that are of more interest to the audience, without asking about topics out of scope of the presenter, improving overall communication and the development of shared cognition. Conclusively, according to the above given quotes, a missing agenda for business model innovation projects is highlighted as a factor for communication failure.

The second sub-issue affecting communication failure within the case company seems a missing agreement on evaluation criteria for business model innovation projects. It is often expressed that it is not understood by business model innovation teams and evaluators alike, what criteria should be applied for business model innovation projects. This state, results in the development of separate evaluation structures within each company "silo", leaving the business model innovation project stuck in-between, trying to balance between expectations, often resulting in communication failure.

" In the beginning of our project several times. Please prepare a business case. ... No this is not right. Okay, so what kind of business? And to actually mean what should it be? ... how do you validate this? You say that Okay, we have 500% but how do you validate that?" (Interviewee 1, 07:40)

Telling about their BMI project, one of the interviewees, reports that during the making of the project, several times it was necessary to change the concept as well as to deliver proof for the changes, without having proper effect on organizational decision-making and successful communication. Even though validation has been provided, the method for providing validation itself was under question, leading to a vicious cycle, of going back and forth between changing the business model concept, delivering validation, validation methods being questioned and discarded and returning to concept or validation method.

" If you have five teams, communicating their own way of working. Then there's no way to compare, where they are, what makes sense. and, you know, so it... there needs to be a standard, otherwise it's not comparable." (Interviewee 10, 24:28)

As another team member of the same business model innovation project explains, there is no agreed-on evaluation criteria in place, that would allow a universal decision-making process. Which slows down the overall company speed developing business model innovations, keeping on too many projects for too long. Hence, a standardized way of evaluating business model innovation projects is called for.

" You need to set limits with the possibilities and the ideas. ... killer idea ... little bit out of scope for traditional ... but ... best idea ... it's difficult. ... with some kind of mini EBA, ... Even these ideas could be put forward... other states ... out of scope doesn't fit into what we are doing" (Interviewee 10, 35:33)

In combination with the previous quote from the interviewee, there should be set limits, that take into consideration strategic alignment as well as business potential on its own. Applying such a standard for evaluation, would improve overall communication within the case company, knowing what to report on a how, helping developers as well as decision-makers.

" There is no sort of real triggers or KPIs or anything that this business cases is fine. This is what I wanted. … the risk of failure is something that the management is trying to avoid." (Interviewee 11, 33:56)

Furthermore, the lack of evaluation criteria for business model innovation projects, leads to postponement or even cancellation of projects, disregarding their potential positive impact. Decision-makers do not have "proof" to argue why to pursue one project over another. Hence, resulting in higher risk of business model innovation projects, than other development projects, which show according to agreed on criteria what their potential is, leaving business model innovation on the side-line.

The third factor affecting communication in the case company is the differing understanding depending on company background. Due to the functional and spatial "silos" in the company, the interpretation and general understanding of business model innovation projects differ greatly, even within the same organization. Usually, having a larger impact on the whole organization, opinions are diverging from one silo to another, but still need to be aligned for the project to be successful and access necessary capabilities and information.

"inside here in our location it's very easy people know each other … with others some challenges … because … you have different parts involved … a very bad example our project … it is so split to so many parts of the company not only in our department but you we have the related companies included … very difficult … absolutely difficult and very insecure. … if you have … to work with Across the business lines, yeah. Very challenging." (Interviewee 1, 44:05)

Interviewees report that communication problems seem to arise especially when starting to communicate outside the own department. Adding challenges and insecurities to the business model innovation project. The above quote refers to an established business model innovation project in the case company. Even though largely supported, spanning over several "silos" the project runs into communication errors.

" Everything is so fragmented. … it causes all the silos also, … these guys, they are so specialised, … all around shipping business… specialized in their own field, which causes them to be, you know, proud of, having their own … there are so big level differences, understanding overall, this could be better." (Interviewee 10, 05:21)

Not only the case company but also the industry in which the case company operates, is fragmented and established silos are commonly encountered. Operating in a variety of the expertise needed in the industry, the case company imports these "silos" into its structure. Having isolated expert silos, affects communication negatively, leaving each silo with a very own interpretation and understanding.

” Our current project is the biggest project we've ever had … even there you hear a lot of different opinions. … what should be done … what is the business potential and so on. … from different angles, … people are having different opinions. … It's good that they challenge … but … Who is having the, let's say … the ones who are having the, the deepest insight into this business … maybe not decision-makers?” (Interviewee 11, 43:40)

Even though being one of the biggest business model innovation projects of the case company, opinions differ greatly from one department to another of what the project is and how great the business potential might be.

” If the management would be here locally. Then you could, because then they would hear discussions and talks. … Because they might they read amazon books and stuff but they, of course, the customer they go to the customer side they discuss with the same level boss who is also reading Amazon. … it would be good if they also draw input from us.” (Interviewee 5, 42:56)

In combination with the previous quote, it is being argued that decision-makers are sometimes not in the position of having the necessary information available to lead the development of business model projects. If the decision-maker would be part of the developing “silo” he or she may be able to. However, currently in the investigated department decision-makers are located outside. Conclusively, the third influence factor on communication is argued to be a diverging understanding towards the business model innovation project based on the spatial and functional silos within the case company.

The final factor affecting communication, is the subjective evaluation of business model innovation projects, being an aggregated problem of the previous 3 factors, due to differing agendas, a lack of agreed on evaluation criteria and the diverging understanding due to organizational backgrounds leads to subjective decision-making of individuals and decision-makers alike, negatively attributing to intra and inter organizational communication of business model innovation projects.

“… it is easy to say, okay, but if the other side says that this is wrong, so what is wrong? … means that will convince you. … There are many things that are that that actually leave some huge space for interpretation.” (Interviewee 1, 08:20)

Many times, during the data collection, the subjectivity when it comes to business model innovation has been mentioned. On the one hand being a result of missing agendas, and evaluation criteria but on the other hand the nature of business model innovation projects itself is contributing to this as well. Many parts of a business model innovation leave large spaces for interpretation, only able to be resolved through discussion and compromise. As the quote below states, there are many projects that reach an agreement concerning its importance but fail to agree on its execution.

”That changed game from within our company actually… several people there when we start some project and they all have their own ideas then of course, it's a question of, of compromise and discussion, … somebody has an idea than other five people okay agree that good idea but how to make it happen. They have the different opinions. Iinternally we should first have a, you know, agreement.” (Interviewee 6, 47:33)

Many paths can lead to successful business model innovation, reaching an agreement on which path to follow remains an issue of successful communication.

” Too often things come, become black or white. … you're trying to squeeze the whole world in a … but it's somewhere, halfway in between. … that is one of the challenges.” (Interviewee 10, 10:07)

Too often the easy way out is chosen, reducing complexity of business model innovation, through answering yes and no questions, only. As will be outlined later during the results, this is not supportive for business model innovation projects, inherently being complex projects. Therefore, successful communication is essential for their development.

”Hallway rumours … a project where a limited group of people is working on … you get this rumour starting … it doesn't do this or that … regardless of how good the idea is… that becomes the ultimate truth … it's almost impossible to tackle that thing anymore after that. Whereas, if you have a standardized way … giving it some points or answering questions yes or no, … something that is really being evaluated” (Interviewee 10, 54:35)

The final comment of this section summarizes the communication problems within the case company well. Business model innovation projects, experience subjective decision making, due to the differing understanding of each “silo”, naming the limited group of people, being the core developer team. Missing evaluation criteria allow for even good potential business model innovation opportunities to be deemed invaluable. And finally, the missing communication agenda leaves everyone to add and reduce the scope of what the project should or should not do, exposing the project to have to answer seemingly everything, and yet what the project provides answers to, being not good enough. In summary, communication of business model innovation projects seems to originate from 3 main sources, a missing agenda for BMI communication, missing BMI Evaluation criteria and diverging BMI interpretation due to organizational separation.

4.1.3 Disconnection of operational and strategic level

The case results from the interviews from the department of the case company indicate that a separation of operational and strategical level is experienced, at least on the side of

the operational level. Even though “Digitalization” is communicated strongly to the operational level as being a major part of the organization’s strategy, business model innovation projects related to this part of the strategy do not receive the attention, expected by the employees of the operational level.

”It's up to the management, it's up to their decision ... there's a big gap we didn't know what they want. ... what is their goal. What is their ambition. And we were just thinking based on that, based on our personal interest. ... it was too holistic It was not a way that I would understand as employee what they mean by digitalization. ... you have to chop it down into smaller pieces so everyone can understand, with different backgrounds with different perspective, what you mean by that.” (Interviewee 2, 58:46)

As the employee, in his quote, above expresses, is the communication of the strategical level not sufficient to inform the operational level of what is expected of them, concerning business model innovation. Hence, a more detailed description might be necessary to align the different departments within the case company to achieve ”digitalisation”. Hence the employee suggest that the strategy should be separately formulated according to functional roles and business lines, to clarify what each departments’ roles should be.

”I think there's also this this contradiction between what you talk and what you do. ... we are saying that we want to be leader in intelligent cargo handling but there is no sort of description or clarification what it really means for us. ... Of course the strategies, this is something that it's like vision that this is what we want to do and where we want to go. ... it's up to each business line and its function within the business line to sort of make their own interpretation ... what does it mean for us. ... The high-level strategy can be ... something, but then ... each business line function, and even ... each individual person should think that what does it mean for me. ... How do I ... support this this idea. ... it would be good to have a little bit more meat around bones. What does it mean to be a leader in intelligent cargo handling.” (Interviewee 11, 25:14)

As another employee adds, do recent strategical actions of the case company, cause confusion on the operational level. Hence, the interviewee suggests, in line with the previous quote, to split the strategical propositions for each department according to their function. However, this “modularization” of strategic formulation, should be done by the operational level, interpreting on a departmental and even on an individual level what role each plays in the overall company strategy. However, this link does not seem to be existent currently in the case company.

”That this, what many people are feeling. Because we are doing here is ... this is just the steel structure, without any knowledge or digitalization or any control system ... just

steel but still it has to be designed by, for every project ... sometimes feels that the focus is on something else that is ours ... Can we be only the like programming house? Can we be the leader of....?" (Interviewee 8, 53:27)

The disconnection of strategical and operational level also seems to be reinforced by a feeling of disinvolvement of the traditional role of departments with the anticipated one in strategy. As the interviewee above indicates, are employees on the operational level experiencing an undervaluing of the current capabilities and are not able to link current capabilities with future capabilities, fearing a loss of competitive advantage of their current positions. As discussed above, does it seem that the case company's strategy is to holistic for each department to find its place. Therefore, it is suggested at this point that strategy should seek a closer connection to operational level, modularizing strategy formulation to include each departments' capabilities and how they can relate to a "digitalization" strategy.

"Then of course when the company gets bigger and bigger then all the decision makers all around the world ... from the case company, the head company we are a big business big companies but lashing inside the case company is still very, very small. ... profitable and a good business but still relatively small. So, number of people involved in that is quite small ..." (Interviewee 6, 11:01)

Establishing this link between operational level and strategical level, however, faces a challenge, as the interviewee points out, that the bigger the company grew over time, the management became more and more spatially detached from operations, reinforcing the disconnection between top and bottom levels of the company. To conclude this section, it is suggested that the case company experiences a disconnection between operational and strategical levels of the company, leading to confusion and unsuccessful communication of strategic goals and ambitions, from the strategic side, and an unsuccessful communication of strategic actions suggested from the operational side. In order to establish this connection, a business model innovation process will consequently be introduced, that includes the establishing of a shared cognition between the levels and considers a strategic involvement of business model innovation within an incumbent firm.

4.1.4 Current business model clashes

The development of shared cognition over new business model innovation projects is strongly influenced by the dominant logic of the firm or, in other words, strategic clashes. Individuals within the company follow an established logic that has developed, as

discussed previously, over a long period of time. This predominant understanding affects what decisions are made and which opinions are formed for new business model innovation projects.

”If you have a company like the case company but you still have the freedom to do certain things within certain limits, so I think that's a good combination. ... But, way too often we are sort of restricted by the sort of the existing business model and the existing way of working.” (Interviewee 11, 1:00:56)

The quote above shows, that even though the higher levels of the company might support the development of business model innovation and set the path for their development, on a deeper level, the development is still restricted by the existing business model logic and the consequently developed ”way of doing things”. The way this issue manifest throughout the process of business model innovation can be manifold. The quote introduced below, however attempts to capture it in words.

”The whole thinking about the traditional ... from the old construction company, then the mindset is totally different ... frames are wrong ... questions are wrong ... and so forth. ... especially for this kind of innovations, digital innovations, it will help ... guys are not from Nokia. ... or you name it. ... who make the decisions ... all of a sudden, you should be able to take change from the pace of slow walking into this 100-meter sprints to 110 meters.” (Interviewee 1, 57:56)

As the case company comes from a traditional construction company background, they have established frames and questions that are asked from new development projects. This questions and frames are not fully suitable to capture the scope of a business model innovation project. Nonetheless, applying these for business model innovation projects, forces the development team to either adjust their answers for the questions and frames demanded or being discarded. Even if adjusted, it leaves the business model innovation project at a considerable disadvantage, having to find a way how to provide the answers, with the given project, even though it does not fit the established logic.

”Who is driving this. It's up, up to his capabilities up to his drive, up to his power, etc. ... expectations, growing and ... When we can get some money? ... I decided to also do this may be more under the radar... new business or new services KPIs are different than money. But if you have a traditional management, they expect money quite quickly. ... balancing between those two teams, our own team and, and the upper levels or colleagues here.” (Interviewee 7, 39:06)

Hence, employees of the case department mentioned that the development of business model innovation projects should be done ”under the radar”, keeping the project separate from established structures and applied logics, to provide it with necessary time to develop a project that does not follow the given, but offers a genuine change for the organisation. But as the quote below adds, is the development under the radar difficult to uphold. Existing structures, demand reporting on projects, and with reaching certain thresholds teams are forced to report business model projects within the established structure, leading to business model innovation projects entering the general research and development process.

”Yeah, actually, what we, what we did was we for a period of time we were doing this sort of under the radar, so that, okay, we were not much even telling them that we are doing this. But of course, when we have to do the budgeting and we have to reserve some money for this and that, of course, at that point, they, they realized that there's something going on here and then of course we need to explain.” (Interviewee 11, 30:25)

After discussing the context of an incumbent and its impact on shared cognition, the results will turn the attention towards suggestions for creating an environment within an incumbent firm to support business model innovation projects and processes. All the aforementioned issues like internal competition, communication, disconnection of operational levels and strategic levels and business model clashes contribute to a unique environment, that requires specific attention and possible modifications to allow business model innovation to happen. The next sections will therefore present results that indicate how such an environment might be achieved.

4.2 Shared cognition in business model innovation processes of incumbents

4.2.1 Continuous business model innovation process

The business model innovation process seems to require a continuous process that reaches further than the organized “sprint” carried out in line with digital projects. The interviewed employees are mentioning throughout the interviews that their projects either have begun before the actual EBA-process, already, or required further attention afterwards. Furthermore, several interviewees mention, that the EBA process was not enough, to decide whether the business model innovation opportunity was worth pursuing.

”So, what we did ... little bit like ice hockey ... you have a chat, and he is ... whistling ... when something needs to be stopped, and it's stopping going, stopping going, but maybe if the organization starts deciding that hey, this will be the marathon. This is not a sprint thing this is a marathon we have three four years marathon ... changing our organization, then it should be more like football ... we are not whistling so much but people are moving ... reviews could be done on the fly. ... when we get some results, then we can see if this is working or not. If not, ... adjust ... like football.” (Interviewee 7, 27:31)

Following the analogy, given by one of the interviewees, the case company currently treats business model innovation projects like sprints. Assuming that an opportunity is discovered instantaneously, by an individual, who suddenly realises that this is it. However, business model innovation projects do require time to develop and carve out the opportunity and what it actually entails. Therefore, it is suggested that changing this logic from ”Ice hockey” to ”Football” coming from we stop the development, once the opportunity commits a fowl towards steering the development in certain directions, correcting false assumptions and ultimately leading to a goal. Of course, decision-”gates” are necessary, nonetheless should not they compromise the possibility to continue afterwards.

“I mean the gates you have to have them in that sense. So, but I do not see these things in any way ... that it's one lane ... you have to be able to have another round or loop or approach or emphasize other things ... actually we notice now that we looked at this from the wrong angle.” (Interviewee 1, 35:04)

Different paths should be offered, to allow the adjustment of business model innovation projects, to better fit internal assumptions. Throughout the process of business model innovation, the exposure to other departmental ”silos” increases, requiring such adjustments to fit the overall company logic. Hence, if not given the chance to adjust to the increasing pool of information and opinions, business model innovation projects, will struggle to survive.

”During the years we have often found out that we have thought that okay this works like this ... finding it actually doesn't, there's happening something totally different. ... we think that this is very structured ... customers have certain rules ... procedures and whatever. ...with this project ... already found out that there is, even within one company there might be different kind of way... this kind of small things. that can actually in the end be very important.” (Interviewee 6, 37:26)

Furthermore, assumptions concerning customers and industry, might experience revision, while pursuing business model innovation. Trying to develop a new business model entails the anticipation of customers' needs. The interviewee reports that while working on a business model innovation project, assumptions made, needed to be adjusted. This changing external information as well as internal information needs to be included into the business model innovation project, which could not be done, if stopped to early.

"I think some of those smaller ... there should be a way to suck in these small ideas into some kind of mini EBA ... Instead of that, the idea is somehow forgotten or, or hanging somewhere there for a couple of years ... before ... somebody, insisting that this is a no. ... an earlier way to pick up these things." (Interviewee 10, 31:39)

It is being mentioned, that there currently is no structured way to include early stage business model innovation opportunities into a structured process that allows them to continuously grow. At the moment, business model innovation opportunities are driven by the individual departments, remaining in their internal and external assumptions "silo" that does not allow the opportunity to adjust to the overall organisational logic.

"It's totally wrong that you need to sell this idea so much because they need to start testing, management should allocate ... some money to the divisions, something for off-shore something ... somewhere else. ... He should, just give the money and control how much money he's giving, but not to decide if this is worth trying or not! ... somebody from outside make decision he just, hears the glimpse of the pyramid, ... his visibility line is limited, ... the people who observe, let them orient let them decide and let them act. ... if you can see, after a couple of iterations, this is not working. Then you have to say ... but they don't do it in the beginning, let them fly and if they will succeed, it will be more productive team later on." (Interviewee 7, 55:33)

Conclusively, another interviewee calls for a continuous process that would allow departments to develop business model innovation ideas, up to the point when they can be included into the "innovation sprint" currently used in the organization, to accelerate developed business model innovation opportunities. Evaluating opportunities to early in their existence, and making definite decisions about their continuation, causes many opportunities to stay undeveloped.

Later during this results and discussion section a process model incorporating the continuous nature of the business model innovation process will be introduced. Outlining the tasks necessary to perform business model innovation and suggesting the re-evaluation of projects throughout their lifetime, without compromising their continuation if they do not proceed as initially suggested. Furthermore, the model will show the interlink of

business model innovation processes and strategy formulation processes, which is argued to be essential for finding shared cognition about business model innovation projects in an incumbent firm.

4.2.2 Interlinking business model innovation with strategy

Taking the perspective, that business models are strategy put into action, this section will lay out how the case company refers to this being important for the process of business model innovation and reaching shared cognition.

”it because that's like so. I sort of, understood. Myself, also that that we are creating the possibilities to put the strategy into action.” (Interviewee 4, 42:54)

The employees in the case company do believe, that when engaging in business model innovation related tasks, that their developments are directly linked to strategic decisions, top management, has communicated for the company. One of the interviewees mentions that he understood his projects as a possibility to ”put strategy into action”, offering a suggestion for top management how his team would implement top management’s strategic direction within their level. In this case, their department.

”High Level strategies, ... how do they sort of come into reality at the lower levels ... to be very honest I would say that our management has not exactly brought any sort of compelling and good story about strategy and where do we want to go. ... Even on a sort of business line level, is sort of in a way left alone to make their own decisions what does it mean. ... there should be at least a little bit more. ... explanation or ideas from the top management ... what does it mean, really... it's more to the middle management ... lower middle management to make the interpretation ... for us this means this or this or this.” (Interviewee 11, 27:56)

The idea of how strategy comes into action on the operative level, seems to be unanswered within the case company. Employees complain that top management strategy does not offer enough information for the individual within the company to understand what their role is, concerning the development. Furthermore, individuals in the lower levels of the hierarchy feel left alone with interpreting the signals top management is giving. This disagreement over top management strategy formulation is furthermore supported by internal reviews which state that agreement with top management strategy is down to a third of individuals within the case company.

”You can see this from the compass at the moment ... the top management has communicated ..., tangible vision or clear vision where to go. ... it's 30% favourable or something like this.” (Interviewee 7, 45:54)

Returning to the previous quote by interviewee (Interviewee 11, 27:56), he states that the interpretation of top management strategy does in fact fall to lower levels of management and ultimately the individuals in each department or business line. Which is at this point argued to be necessary for finding shared cognition within the incumbent firm case company. Connecting this need for top management interpretation in the lower levels of the organization, with the following quote, shows that business model innovation suggestions, should be used as guiding examples for strategy formulation in the lower levels.

”That way would help understanding that what is the direction, actually, ... to transform into digital ... it's difficult to find the bright light ahead immediately but wide range of some things and some things will go forward, and those will be kind of like guiding things for others ... It is something like this is what we want to go for. ... So far. I think it's been more like yes or no, kind of communication ... to show that okay this is the area that you really need to improve. Otherwise it's not going to work ... That would be a way forward.” (Interviewee 10, 1:00:10)

At the moment the case company according to the interviewees, is only communicating yes or no decisions when it comes to business model innovation, not giving feedback of which parts of the proposed business model were the reason for its cancellation. Leaving the developers wondering what they should do different the next time. Providing them with examples from their own department or other departments in the organization would support them in interpreting top management strategy and their departments contribution to it. Such projects could be used as ”bright lights” ahead, narrowing down the direction of strategic actions and attracting support from departments and their interpretation how they could support such projects.

”Of course, the guys in the bottom or the people in the bottom, so of course whatever they are talking and developing so that should be somehow aligned with the strategy. Because otherwise, it will be killed.” (Interviewee 11, 48:40)

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”It doesn't it doesn't have to be fully aligned but somehow align, ... it goes up, and the management is thinking yeah this is good ... twist to our strategy.” (Interviewee 11, 50:35)

Of course, this does not mean, that each department is free in deciding whatever business model project they would like to develop. As stated above, business model innovation projects should be aligned with top management strategy at least to a certain extent. However, there seems to be a need for a channel that communicates business model projects with strategic bodies in incumbent firms, who take up the responsibility to evaluate projects from the organization's departments. Communicating which projects are to be developed further and communicating the reason why others are not. Utilizing exemplary projects that embody top management strategy, to reach a state of shared cognition, with each individual, aligning each department with each other, to reach the vision laid out by top management. The quote below summarizes the strategic connection to business model innovation.

"They are the brain and we are the guts." (Interviewee 5, 46:14)

While top management should be responsible for defining the overall organisation's strategy, the higher levels of an incumbent firm do not have the information available that allows them to define detailed strategic actions for each department. Issues like mentioned prior to this section highlight the disconnection of strategic and operational levels as well as the existence of silos in incumbent firms that consequently leads to an accumulation of experts for specific tasks in each silo. Hence, sticking to the analogy of the "brain" and the "guts" top levels of an incumbent firm should decide about the direction acting as the "brain" of the organisation, while the "guts" inform about the capabilities and possibilities the body can perform. Only if brain and guts are aligned, the whole organisation will move in the desired direction.

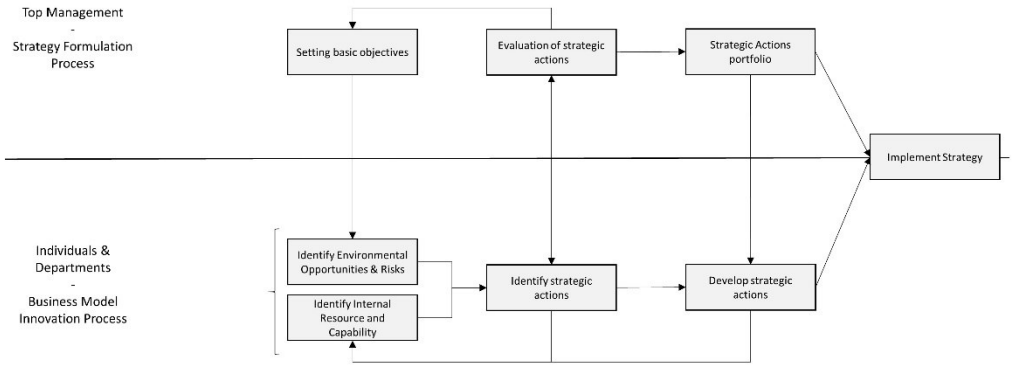

Figure 6 Incumbent BMI process

Conclusively, the process model, introduced in Fig. 6, is suggested creating the link between organizational strategy formulation and the business model innovation process within incumbent firms. Creating a separation between the two levels and associating task for each. The implementation of such a process, would not only support the continuous ad repetitive nature suggested previously but would also allow the development of shared cognition within the incumbent case company. Ultimately, the model suggests that only if top management and individuals within departments of an established firm work together in business model innovation projects, a strategy, that attempts to modify, add or terminate a business model will be able to succeed. Following, the above process model will be described in detail. The process begins with the setting of basic strategic objectives, being a broad direction of what the established company wishes to achieve. In our case company, this step has been done by communicating a wish to ”digitalise its business”. This setting of general objectives, then is picked up by individuals within different departments, interpreting their external environment for opportunities and threats related to digitalisation as well as the identification of resources and capabilities available to them, that could help solve or avoid certain opportunities and risks in their external environment. This combination of internal and external factors to the individual leads to the identification of ”strategic actions” or business model innovation opportunities. These strategic actions should be seen as suggestions for top management of how the individuals/department believes the company could achieve the basic strategic objectives. If top management realises, that the actions suggested by several departments does not answer to the understanding of top management and their strategic understanding, an adjustment of basic strategic objectives can be done. If strategic actions are identified that are being favourably evaluated by top management, these projects will be added to a strategic action portfolio, that summarizes the strategic actions per department of the incumbent firm. With the decision to add the strategic action to the portfolio, the individual, team or department is encouraged to proceed the development of the strategic action. Modifying, adding and terminating strategic actions in the portfolio gives top management the opportunity to align projects with overall organisational strategy and ultimately decide on the strategic direction for each unit. On the individual/department-level the iterative nature of the process is highlighted, suggesting that along the development and identification of the strategic actions, new information might alter the business model innovation projects. This requires a possible return to revisit internal and external factors laid out in the beginning of the process, adjusting the strategic actions and the development path of them. Ultimately, implementation of strategy, being the final outcome of this process is conclusively suggested to be achieved by the interaction between top management and individuals and/or departments and by them reaching a shared cognition about the direction where the company is going and what opportunities, resources and capabilities are the ones that get the organisation there.

5 CONCLUSION

5.1 Theoretical implications

This thesis, first of all, contributes to recent theory on business model innovation by further clarifying the challenges encountered in an organizational context. Factors like competition, communication, disconnection of company levels and business model clashes have been identified. These findings build up on the challenges identified by Schneider and Spieth's article (2013, 6) who pose the question on how to overcome resistance to change and defence of the status quo of the organisation. The above-mentioned factors laid out during this thesis, further explicate how resistance to change and defence of the status quo arises in the first place. Incumbents are mentioned in business model innovation literature to encounter difficulties to innovate their business models as opposed to smaller companies and are asking for further investigation into the root causes (Koen, Bertels & Elsum 2011, 8). Previous research has associated challenges for the different stages of the business model innovation process and offered suggestion on how to overcome them as practitioners (Frankenberger et al. 2013, 11–14). As opposed to such findings, this thesis contributes to this knowledge by relating challenges specific for the context of incumbent organizations. Linking challenges of different stages of the process with the challenges identified in this work, could be subject to future research, advancing our understanding how business model innovation processes should be organized in the context of incumbents.

Second, Previous research has linked business model innovation to different fields of study. For example, has business model innovation been linked to the concept of opportunities usually associated with entrepreneurship (George & Bock 2011, 26). Others additionally see the need to further strengthen the relation of business model innovation with organizational strategy (Foss & Saebi 2017, 221–222). This thesis attempts to create this link to organizational strategy, offering a process model that describes the differing roles of operational and strategic level in the process of business model innovation. Furthermore, it can be argued that it also establishes a link between organizational strategy and opportunities from the entrepreneurship field. The opportunity concept should be further investigated for the operational level of the proposed process model whereas the strategic level leverages organizational strategy. However, whether or not the here proposed process model can be seen as a bridge between organizational strategy, entrepreneurship and business model innovation might need further investigation. Previous research has already attempted to create the link between business model innovation and organizational strategy (Chesbrough 2010, 361–362; Achtenhagen, Melin & Naldi 2013, 31–35; Spieth, Schneckenberg & Ricart 2014, 242–244).

Third contribution of this thesis is the attempt to provide a framework how existing process models could be fitted into incumbent organizations. Previous research has brought forward different models according to which practitioners can orient themselves. The 4-I framework (Frankenberger et al. 2013) the four paths to BMI suggested by Girotra and Netessine's article (2014) and others like the one proposed by Euchner and Ganguly's article (2014, 34). However, these models are targeted on the individual business model innovation project and how to advance it. The contribution this thesis makes to advance the study into business model innovation process models, is to provide a perspective for an incumbent firm context, in which not one but several business model innovation projects take place simultaneously. More often it is not about following a path that focuses on one's own project, but other factors need to be considered in this context and how decision-makers can decide which of these projects to pursue further. In fact, other researchers identified the need to find the missing link on how to integrate named process models into a company-wide context (Chesbrough 2010, 361–362; Ahokangas & Myllykoski 2014, 14–15; Spieth, Schneckenberg & Ricart 2014, 242–244). Even though one model has been used in the end to define the individual project's process, others could be imagined. Which model is most suitable depends on the organizational context, industry and other factors and could be another future research implication.

Fourth, this thesis attempts to structure the impact of path dependencies and the dominant logic of the firm by offering the concept of shared cognition and establishing the link of business model innovation with organizational strategy as a possible reply to challenges arising from path dependent behaviour and established logics within an incumbent firm. Previous research has identified the challenge of business model innovation in an incumbent context to be linked to having to change the core of thinking in order to successfully innovate a business model (Koen, Bertels & Elsum 2011, 8). On an individual cognitive level other research has called for the impact of context on how individuals make sense of their environment (Daspit 2017, 789–791). The cognitive agenda of BMI, what biases exist and how sensemaking happens and how this knowledge can be utilized to reframe the dominant logic of a firm is not largely understood to this day (Spieth, Schneckenberg & Ricart 2014, 242–244). This thesis not only discusses how each individual makes sense of their environment but furthermore attempts to specify the dynamics of the whole organization, concerning business model innovation. Acknowledging, that differing sense-making mechanisms exist even within the same organization, path dependencies and the dominant logic of the firm have a large impact on the cognition of each individual and need to be considered when designing a process of establishing shared understanding throughout the whole organization and avoid dominant logics or past events to strongly prevent new projects to come forward. Previous research has called this reaching a cognitive "break" within an organization (Cavalcante, Kesting & Ulhøi 2011, 1337–1339), or understanding the organizational dynamics (Ahokangas &

Myllykoski 2014, 15). However how this can be purposefully reached, is still open for debate. This thesis is a first step towards that direction, offering the concept of shared cognition and suggesting a process model to support reaching this "break". Gärtner and Schön's article (2015, 50–53) dealt with the impact of dominant logics and path dependencies on the process of business model innovation, highlighting the need to focus on knowledge management in the process of business model innovation, as important knowledge is often filtered out due to firm dominant logic influenced sense-making. This thesis further advances this understanding offering a process that separately organizes a BMI process that evaluates projects, utilizes their knowledge and attempts to avoid the interference of dominant logics and path dependencies.

Finally, this thesis contributes to ambidexterity theory. Business model innovation has often been described to require a balancing of different behaviour. The integration and separation of the business model innovation with existing business models is one topic for this matter. If not handled properly, business model innovation will be unsuccessful if jeopardizing the existing business model of an organization. (Cavalcante, Kesting & Ulhøi 2011, 1337–1339) Just like the challenge of balancing between integration and separation, the matter of engaging in explorative and exploitative behaviour is another ambidexterity challenge of business model innovation. How much emphasize does an organization place on the existing business model and the new one. Establishing the "fit" between the two is difficult to achieve and requires a continuous switch between the two behaviour patterns (Spieth, Schneckenberg & Ricart 2014, 242–244). Berend et al.'s article (2016, 199–200) also describes this challenge as switching between "drifting" and "leaping" mechanisms, drifting describing to build up on the current status whereas leaping is developing unrelated projects. Although further discussion is necessary how the here presented models of shared cognition and the intersection between organizational strategy and business model innovation specifically relate to these challenges, they suggest a way that business model innovation projects can be kept separated from company practice, largely influenced by path dependent behaviour and dominant logics, but still be integrated into the organization through the link to strategy formulation processes. Furthermore, the link to organizational strategy offers a suggestion for how to balance explorative and exploitative behaviour within the same organization. Collecting innovation projects and creating a portfolio offers a tool to communicate which future directions will be taken by the company in both directions. Utilizing strategic communication methods, this will be carried through organizational levels, aligning opinions about what explorative projects show high enough "fit" to existing exploitation of business models.

5.2 Practical implications

Practical implications the thesis offers are manifold. First, the thesis provides practitioners with an enumeration of challenges for business model innovation in incumbent firms. Internal competition in the established organization, various communication challenges, disconnection of operational and strategic levels as well as business model/strategic clashes. Second, the thesis provides detailed explanations about the origins of the named challenges and linking them to theory. Third, the thesis offers a suggestion of how to implement a process model that helps overcoming challenges of incumbent firms when engaging in business model innovation. Finally, the discussion of challenges and solutions utilizes interview results and observations, discussing how challenges manifest in practice, giving specific examples, that help understand how to identify what a practitioner is dealing with and how to react. Practitioners might be overwhelmed by the task of managing and executing business model innovation, as every project comes with large implications for the future of a company. Strategy-makers who are trying to present a unified future understanding of the company and what it does, struggle with linking diverse business model innovation opportunities to resemble the outcome of business strategy. On the other side, practitioners in the operative levels of the company, engaging in business model innovation attempt to provide suggestions for how named strategy could be implemented in their context, and how they see the position of their department in the envisioned future of strategy-makers. Coming from different backgrounds, business model innovation opportunities, become a representation for a smaller fraction of the incumbent, that need to relate to each other, arguably task of strategy-makers. Managing a business model innovation portfolio, creating an interconnected process model between strategy formulation and business model innovation is a possible solution to manage the challenges practitioners face and helps creating a unified future picture of the company, that has been created by strategic as well as operative levels of the company which is understood and support by the majority of the company, through reaching a shared cognition about what the company is and what it could be in the future. Therefore, this thesis suggests, that practitioners, especially business model innovators within an incumbent firm should attempt to create an intersection between strategy and business model innovation. Of course, merely creating this link is not enough to ensure successful business model innovation. Topics like business model innovation evaluation and structural change, as mentioned need to be considered as well. However, creating this link is a first step to improve business model innovation performance in incumbent firms. Specifying the technicalities, how this is evaluated and structurally integrated is another question that needs to be answered in the future.

5.3 Limitations and future research

The thesis faces certain limitations. Starting with the choice of a single case study, the generalizability of the results might be limited to the case company or its industrial context. However, the choice of a single case study allowed the in-depth investigation of the phenomenon, allowing to create the theoretical concept of shared cognition and how it might be solved in the context of an incumbent firm. Second, the data collection was conducted in a limited reach of the case company, only few departments were included, and focus was placed on one specific department of the case company. Hence, it is questionable if other departments have the same experiences about business model innovation from their perspective. On the other hand, focusing on one department and the business model innovation projects they pursued was appropriate in this case, as a new team was specifically created for implementing business model innovation within the observed department. Investigating this experiment, laying out challenges and drawing conclusions, could help broadening the reach of business model innovation throughout the organization. However, it needs to be mentioned that the business model innovation projects in the case department have not been the only ones within the case company. There have been others in development at the same time, which can of course impact the decision-making, concerning support und resource allocation, returning to Fig. 2 to Fig. 4 in Chapter 2.3.4, this research investigated especially how the process unfolds in one department and less how it proceeds to other departments and finally the whole organization, this investigation, to take it to a company-wide phenomenon and compare departments and their experiences against each other, could contribute to strengthening the concept of shared cognition and the need of strategy formulation being interlinked with business model innovation processes in incumbent firms.

Third, as a link to strategic processes is suggested, an investigation on how strategy is created within the case company or other incumbent firms, is another limitation of this study. Understanding the other side of the coin would be important to further solidify the findings of this research and broaden its understanding of what interconnections exist and should be created between business model innovation and the strategy formulation of the incumbent company.

Fourth, certain topics identified as important to the issue of business model innovation in the context of incumbent firms had to be left untouched, due to space and time restrictions of the research project. As well as, parts of the data collected during the research period could not be fully included into the results. Therefore, it should be mentioned that more useful findings might be discovered if looking at the data from a different perspective. The Appendices two and three offer two examples of such findings and hopefully motivate further research. While appendix 2 discusses a structural adjustment of an incumbent firm to better fit the requirements of business model innovation, appendix 3

deals with the evaluation of business model innovation projects throughout their development. Both issues are important to the process of business model innovation within incumbents and should receive further attention in future research, however, to keep this thesis as comprehensive as possible, they had to be placed in the appendices. The adjustment of company structures, to support business model innovation, specifically the separation that could provide business model innovation projects with the suggested development "under the radar" is not covered during this thesis. Furthermore, touching on the challenges and barriers of business model innovation, identified to be amongst others, communication, competition and business model/strategic clashes, the evaluation of business model innovation projects needs to be considered. The evaluation of business model projects, as well as their progress evaluation and resource allocation has not been covered in this thesis, even though tremendously important for the implementation of the given process within an incumbent company. The two topics mentioned previously, provided suggestions for a possible adjustment of the case company's structure and how business model innovation processes could find their place there. Furthermore, an evaluation structure for business model projects, how their progress could be observed and objectified and how this could be linked to organizational support and resource allocation are both added in the appendix of this thesis.

Starting with the last-mentioned limitation of organizational structure and business model innovation evaluation, a future research opportunity is to further develop the models provided in the appendix of this thesis. Often employees of the case company mentioned the incomparability of business model innovation projects and the impossibility of comparing them against each other. Suggesting that the clarification of evaluation criteria and how their progress might be measured is a fruitful future research opportunity. (Spieth, Schneckenberg & Ricart, 2014, 243) Having been suggested, that business model innovation requires protection from the current business model and the current organization up to a certain point, suggests, that the point in time needs to be identified, when business model innovation projects are ready to be exposed to the larger organization. Hence, adding up on the last suggestion of progress evaluation, researcher should place special attention to when a project is ready to be communicated further within an organization. Furthermore, how a separate structure could be created that provides the protection from the organization without risking business model innovation processes to run separately from the rest of the organization, creating its own silo that does not find its connection to the rest of the organization and ultimately leading to its separation. (Foss & Saebi 2017, 213-214)

Third, shared cognition being a new theoretical concept, its links to business models serving as cognitive tools, supporting individuals in making sense of their environment, could be established further. Business models in research are described by some researchers as tools that support individuals and how they can make sense of their environment.

They provide the individual with a mental checklist, a structure of what topics to consider as well as how to communicate information of business model innovation with their peers. Establishing a link with how different tools and artefacts of business model innovation might support the process of business model innovation in the context of incumbent firms could help practitioners how to implement the proposed process of this thesis, while offering researchers a possible data collection method, that would allow the testing of different artefacts against each other in certain contexts. (Huber & Lewis 2010, 22; Schneider & Spieth 2013, 23; Taran, Boer & Lindgren 2015, 325; Daspit 2017, 787; Saebi, Lien & Foss 2017, 576)

Fourth, it should be further investigated whether the concept of shared cognition does apply in other incumbent firms, by investigating whether they face the same challenges, or if they are dependent on other factors like industry, customer type or dominant employee backgrounds. Conclusively, are there other incumbent companies that face different challenges when it comes to business model innovation and do, they require differing adjustments, where the establishment of shared cognition might be less important, possibly stressing the utilization of experts more. (Sosna, Trevyno-Rodriguez & Velamuri 2010, 401)

Even though partly discussed during this thesis, the difference between young, entrepreneurial firms and incumbent firms, should be investigated further. Comparative studies between them, would greatly help to separate barriers, challenges and advantages and attribute them to their context. Hence, it is suggested here that investigating both contexts as part of one study. Doing so, might greatly advance our knowledge of business model innovation processes and how to adapt them to its context. (Sosna, Trevyno-Rodriguez & Velamuri 2010, 402)

Finally, during this thesis, a link between organizational strategy research and business model innovation has been established. However, other links to different fields of research have been mentioned at the same time. Especially, when looking at the proposed process model in Fig. 6 a link between entrepreneurship and business model innovation can be identified. Concepts like opportunity identification and opportunity exploitation hold opportunities to further understand how an individual finds possible business models and develops them into a functioning business. In other words, identifies and exploits them. Furthermore, strategic entrepreneurship might be another concept to potentially provide answers on how business model innovation could be the link between organizational strategy and the entrepreneurship field. (Schneider & Spieth 2013, 21; Daspit 2017, 787)

6 SUMMARY

Starting from the increasing challenges of incumbents to maintain a competitive advantage due to increasing complexity of value creation, delivery and capture (El Sawy et al. 2010; Schneider & Spieth 2013, 2; Euchner & Ganguly 2014, 33-34; Sachsenhöfer 2016, 40; Remane et al. 2017, 6) and addressing the need for business model innovation as a possible this thesis identified gaps in the research of business model innovation in the setting of incumbents (Amit & Zott 2001; Morris et al. 2005; Lindgren, Taran & Boer 2010; Osterwalder & Pigneur 2010; Taran, Boer & Lindgren 2015, 304). Such organizations show different preconditions than their younger counterparts. Although process models are suggested (e.g. Osterwalder & Pigneur 2010) they do not incorporate the context of an incumbent firm and therefore should be modified to provide a suitable answer to the challenges such firms are facing. It has been highlighted that incumbents engaging in business model innovation the process, with increasing company size, increasingly transforms in an organization-wide cognitive process (Newell, Shaw & Simon 1962; Spieth, Schneckenberger & Matzler 2016, 409; Foss & Saebi 2017, 216). Ultimately, making the inherent interdisciplinary links of the business model innovation concept more and more important to incorporate and consider (Daspit 2017, 787). Therefore, this thesis, asks the question of how strategy should and could be integrated into the process of business model innovation (Spieth, Schneckenberger and Matzler's article 2016, 409). Furthermore sub-questions have been defined, to clarify what preconditions business model innovation faces in an incumbent firm, second, how the process of business model innovation consequently should be modified and third, what role shared cognition plays in the process of business model innovation and linking it to strategy.

To set a theoretical framework for the previously identified questions, this thesis starts by providing an introduction of what business model innovation is. The creation, delivery and capture of value is consequently been chosen, being best suitable for the purposes of this research (Yunus et al. 2010; Hossain 2016, 344). Furthermore, it is being introduced what is considered to be a business model innovation. The change or replacement of one or several components leading to a purposeful, novel, non-trivial impact on the current or new business model in comparison to previous business models applied within the organization or its industry. Such a change or replacement is the outcome of a designed process for which several models have been presented to clarify the current state of research in this matter. (Foss & Saebi 2017, 216) Furthermore the nature of a business model innovation process is being discussed, coming to the conclusion that the process is dynamic, repetitive (e.g. Pynnönen, Hallikas & Ritala 2012, 4-5) and utilizes continuous and trial-and-error learning (e.g. Sosna et al. 2010). Ultimately attempting to find a "fit" between the organization and its external environment (McGrath 2010, Smith et al. 2010, Sosna et al. 2010; Schneider & Spieth 2013, 9; Taran, Boer & Lindgren 2015, 310). A final

discussion concerning business model innovation clarified the difference between other innovation projects and business model innovation. Setting out the difference in business model innovation being more complex (Foss & Saebi 2017, 218; Rivkin 2000) and uncertain (Amit & Zott 2012; Hossain 2016, 344; Saebi, Lien & Foss 2017, 569-570) when compared to the current business model applied in the incumbent.

Previous research on business model innovation in incumbents is subsequently discussed. Starting with the challenges incumbents face when attempting to run several business models at once within the same organization. Usually, business model innovations are seen as a threat to the current business model (Teece 2010; Ahokangas & Myllykoski 2014, 9), leading to an organizational separation between old and new or its inevitable cancellation. Hence, this thesis concludes that business model innovation is a balancing act between integration and separation of two or more business models inside one organization (Gärtner & Schön 2015, 53; Sachsenhöfer 2016, 38-39). If done properly utilizing the advantages of already having an existing organization. Ultimately, making business model innovation an ambidexterity challenge (Markides 2013, 313). Second, research on business model innovation within incumbent firms has concentrated on path dependencies and their impact on the business model innovation process. Hence, this thesis follows the idea that previous business models set the direction of future business models developed inside an organization (Taran, Boer & Lindgren 2015, 302; Saebi, Lien & Foss 2017, 570) due to so called investment and learning effects as well as adaptive expectations/cognition (Gärtner & Schön 2015, 47). Third, business model innovation research focuses on dominant logics in incumbent firms (Bettis & Prahalad 1995), having a considerable impact on business model innovation success. Strongly linked to path dependencies, the dominant logic of a firm is the accumulation of all past decisions within an incumbent firm, demanding a certain direction of development (Täuscher & Abdelkafi 2017, 163). Ultimately, the incorporation of business model innovation research in incumbents leads to the conclusion that simultaneous strategic changes is important for business model innovation success in this setting (Foss & Saebi 2017, 218). Highlighting the interdisciplinary nature of the business model concept, especially in this context.

To offer a unified theoretical framework for business model innovation within incumbent firms, the concept of shared cognition is introduced. Describing the process of business model innovation within an incumbent firm as a collective cognitive process that involves various individuals rather than a core team or even one individual (Björk 2012; Schneider & Spieth 2013, 6; Ahokangas & Myllykoski 2014, 13). While doing so, shared cognition creates the link between business model innovation, path dependencies and the dominant logic of the firm. Arguing that business model innovation in fact attempts to overcome path dependent behavior and change the dominant logic of a firm (Prahalad & Bettis 1986; Maglio & Spohrer 2013; Daspit 2017, 789). Finally, the link to an incumbent's strategic process and involvement of management is added (Wirtz et al. 2016, 38)

and concluded with providing an exemplary process model of shared cognition formation within an incumbent firm.

To test the research questions of this thesis, an in-depth case study of an incumbent case company has been conducted, applying an action research approach, putting the researcher directly in the practical implication of a business model innovation process in the setting of an incumbent firm. Throughout the research process, data in form of participatory observations, secondary data sources and semi-structured interviews of key employees has been collected. Collecting data from these various sources allowed the researcher to successfully triangulate information and ensure objectivity, validity, reliability and trustworthiness of the results. Applying the Gioia-method for theory construction results were identified.

Starting with clarifying barriers, that business model innovation processes face within incumbents. This thesis identified, internal competition, communication, disconnection of organizational levels and business model clashes as the major barriers of business model innovation. These findings are largely coherent with recent research on this topic, introduced during the chapters of path dependencies, the dominant logic of the firm and the running of several business models at the same time. Following, this thesis was able to create a process model that connects business model innovation to the strategic formulation process of an incumbent firm, arguing in favor of establishing this link, to achieve successful business model innovation in an incumbent's context. Furthermore, the dynamic and continuous nature of the process as suggested by previous research on this topic was incorporated into the process model, not only offering the connection between business model innovation and strategy but also fitting it into previous research. This makes the proposed process model easy to fit in with previous research and additionally develops it further by linking it to the field of organizational strategy.

Finally, this thesis concludes by offering theoretical and practical implications. Building on previous findings like the ones by Frankenberger et al.'s article (2013, 11–14), challenges of incumbents with business model innovation are laid out. Second, a link between business model innovation theory and organizational strategy is created as pointed out by previous articles like Foss and Saebi's (2017, 221–222) who identified to need to further discuss this matter. Third, existing process models for business model innovation and how they might be applied in an incumbent context has been established following the suggestion of Spieth, Schneckenberg and Ricart's article (2014, 242–244). Fourth, the tremendously important influence of cognition, path dependencies and the dominant logic of the firm onto the business model innovation process has been covered during this thesis addressing identified gaps and further improving the knowledge of previous research like the one done by Gärtner and Schön's article (2015, 50–53). The final theoretical contribution has been to ambidexterity theories, laying out how a balance can be achieved in an incumbent context between conflicting behaviours like integration and

separation of business model innovation from the existing business model as proposed by Cavalcante, Kesting and Ulhøi's article (2011, 1337–1339).

Practical implications of this thesis were identified as threefold. First, a list of challenges has been provided according to which practitioners can organise themselves what to encounter when engaging in business model innovation in an incumbent context. Second, origins of the challenges and their root causes have been established, which help practitioners to understand where and why challenges like resistance to change and protecting of the status quo occur. This helps the individual to react to such behaviour and possibly avoid it all together. Third practical contribution of this thesis is a specific process model that can be adjusted to an individual company context and help implementing a company-wide business model innovation process that avoids laid out challenges.

Finally, limitations and future research opportunities were identified. The most prominent limitations, but not all of them, have been argued to be the generalizability of this study, due to its limited sample size and reach in the organization and second the missing strategic perspective. On the other hand, based on the discussed limitations future research is recommended to focus on progress evaluation (e.g. Appendix 3) of business model innovation projects, how an incumbents structure impacts the process of business model innovation (e.g. Appendix 2) and what changes might be desirable to support business model innovation processes and finally what tools are most suitable to support the business model innovation process within an incumbent firm.

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APPENDICES

Appendix 1 Semi-structured Interview

Operationalization Table					
Research Problem	Sub Problems	Themes	Concepts	Chapters	Research Questions
How should an incumbent firm's strategy be linked to its BMI processes?	What challenges does BMI face in the context of an incumbent firm?	What is the context of an incumbent firm and how does it affect BMI?	BMI in the context of incumbents (practice)	4.1	4.; 5.
			Business model innovation	2.1	1.; 2.; 3.
	How might BMI processes be modified to meet an incumbent firm's requirements?	What modifications to BMI processes should be considered in incumbent firms?	BMI in the context of incumbents (theory)	2.2	1.; 2.; 3.
			Continuous BMI process	4.2.1	3.; 4.
	How might shared cognition be reached in BMI processes for their success?	How can shared cognition help incumbent firms to link BMI to their strategic processes?	BMI in the context of incumbents (theory)	2.2	1.; 2.; 3.
			Shared cognition	2.3	5.; 6.; 10.
			Link between strategy and BMI	4.2.2	7.; 8.; 9.

Table 2 Operationalization Table

The questions asked during the semi-structured interview are supposed to open the topic about the use and process of business model innovation in practice. To achieve this, the knowledge about business models and how such are developed and implemented is opened. As the thesis' goal is to figure out a way to operationalize shared cognition in order to overcome barriers in incumbent firms, that have been reported repeatedly in the literature, the use of business model "tools" and underlying logics are discussed with the interviewee and how he/she sees the use of them for everyday work with business model innovations. Finally, to understand if the company in question really shows the problems that incumbent firms are reporting, the topic of how the established structure, culture and other artefacts of a company are affecting the business model innovation process.

1. Can you explain what you think a business model is?
2. Which parts do you think should be especially covered by a good business model, so it might work in your opinion?
3. Which parts do you believe are the most important and when should they be discussed?
4. Have you participated in a business model innovation process? What was your experience, did it work, or did you learn something?
5. Have you used business model tools (like examples) to work together with a team? How did you use them?
6. How did business model tools help you develop and/or implement new business model ideas?
7. How easy or hard did you think it is in your organization to gain support for your ideas?
8. How does management react to radical new ideas in your opinion?
9. Do you believe business models might help you attract support in your organization or help the communication in your team?
10. Were you able to establish rapport amongst your peers and possibly gain support from their expertise?

Appendix 2 Structural change for BMI in Incumbents

The case company experiences challenges, concerning the process and how the structure should be organized accordingly. There is a variety of innovation and R&D departments currently working within the company and the company group it belongs to. Clarifying what the responsibilities of each of these departments and teams is, might help improve the overall business model innovation performance. As the scope of this research has been done in one department of the case company, the interpretations of the interviewees are

elevated to an organization-wide structural concept, that incorporates the responsibilities of the actors needed to successfully perform business model innovation within the case department.

" You have to be kind of create this web and being the centre." (Interviewee 5, 25:47)

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" That is how a self-going organization runs ... one is having a lead, and he picks up the people he needs..." (Interviewee 7, 29:39)

During the investigation of this thesis, the department tried to establish a "customer innovation team" which was attempting to perform business model innovation within a business line of the case organization. The general idea of the team is summarized by the quotes above, stating that the team was supposed to create connections within the department and utilize them to identify new business model innovation opportunities from the bottom up, adding capabilities necessary to execute the business model innovation project, as well as to gather customer information by organizing communication through sales channels.

" Add a new structure to the way of thinking. ... a gateway to pass the message, like new learning to whole organization ... act like a teacher ... how to bring new solution here in the company. The whole business model innovation team... act like a supervision or superior of the projects ... to monitor and control and maintain the idea. And ... they can pass the idea ... to the customer." (Interviewee 2, 39:19)

The responsibility of this team was the coordination within the department and their direct customers. Communicating internally and externally new business model opportunities for gathering further insights and to experiment with customers and colleagues. Furthermore, supporting the development of promising projects, by supervising progress as well as collection and maintenance of business model innovation opportunities, by creating a business model innovation portfolio on a departmental level.

" We did not find that person. ... still there was some level, that we did not reach. ... hotline to the head company level. ... down there who are more independent and can hence introduce idea to Innovation team." (Interviewee 4, 18:22)

Even though it does not have to a "customer innovation team", the responsibilities and lines of communication need to be clarified to be able to enable a departmental business model innovation process. An interviewee reports that the innovation team was not able

to establish a connection with the top levels of the business model innovation departments currently working in the case company. The line of reporting went through operative management, which did not include the communication in-between innovation departments. Hence, it is suggested that a communication line between departmental innovation teams, and companywide business model innovation department needs to be created.

” Kind of internal venturers ... I'm the business owner for this new initiatives and Head of Innovation should support us.” (Interviewee 7, 50:59)

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”we know the customer we know the customer pain point, we need to incubate what are these initiatives... when that is ready, we start introducing this to the management team, and ... operating management ... This manager is any way in the Case company’s management, so he can share the ideas with there but message is going easier to the CEO, or president of the case company via that, compared to the operating management. ... it's a business units’ responsibility to develop things under the radar ... we had 18 things. ... The manager is thinking, how many new initiatives from case company ... for the fast lane.” (Interviewee 7, 41:47)

As the interviewee states above, customer innovation teams should act internal venturers on a departmental level, within the case company “silos” have developed, which seem to require a departmental team that communicates across these boundaries. Furthermore, the interviewee states the opportunity such teams could have on the departmental level. Customer information is directly available, suitable to formulate business model innovation opportunities. These opportunities need to be communicated through a separate channel than the operative management, having a separate link to top management. As it has been argued in this thesis, that business model innovation is inherently linked to organizational strategy, operational management is too much involved with the current business model leading to company inertia and resistance, due to clashes with the dominant logic of the company, currently applied. Therefor it is suggested to create a separate communication that leads through organizational level directly to strategic management. The suggested hierarchical structure below, shows how in theory this channel could be established within the case company. Providing an answer structure, process and responsibilities of the actors in the process of business model innovation.

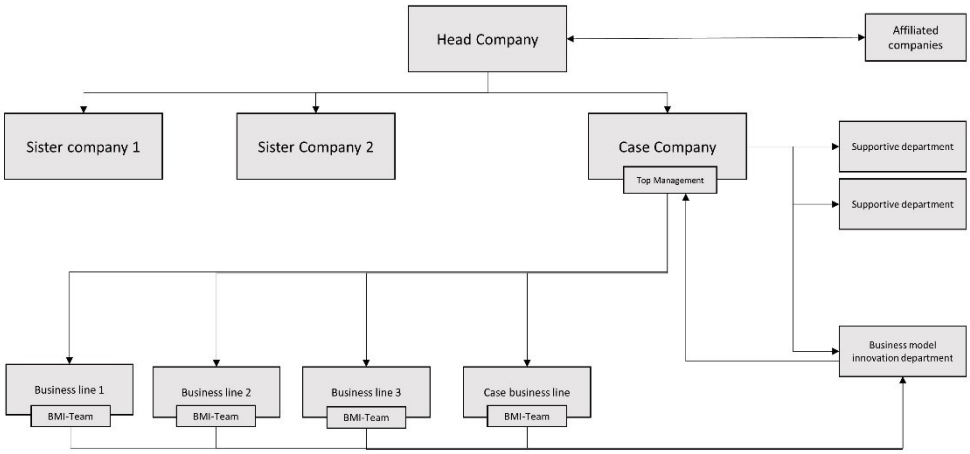

Figure 7 BMI Hierarchy

The hierarchical chart in figure 7 offers a suggestion of how the roles and responsibilities might be organized in the case company and its departments. Although the case company has already established some of the departments suggested here, they do currently perform different roles and responsibilities. It is suggested according to the findings presented above, that each business line within the case company should have a business model innovation team, which performs the responsibilities to identify, maintain and support business model innovation projects on a departmental level. These teams are in direct contact with an ”out-of-structure” business model innovation department, which aggregates and elevates the projects of each department on an organizational level. Whereas, the departmental teams, stay on a departmental perspective, the BMI department, combines, cancels and accelerates certain projects, best suitable for the overall company direction. The business model innovation department should have a direct connection to top management, especially strategic formulation, which should be fed with new business model innovation projects, offering direction and concrete examples of how company strategy is and is supposed to be put into action. This strategy is consequently communicated downwards to the business line level again, adjusting the business model innovation process direction of the operational management and finally individuals. This concept might be elevated to a company-group level, each sister company having a business model innovation department of their own and the head company a department that is responsible for coordinating inter-organisational business model innovation projects. This matter however is not scope of this thesis and will not be discussed further at this point.

Appendix 3 Progress evaluation of BMI in Incumbents

This section will have a look at what business model innovation process participants think their outcomes should be measured on and by whom. Especially in the context of incumbent firms, the evaluation method often clashes with the pre-existing business logic demanding the same information and proof as R&D projects, following the same logic as the established one. Whereas innovation projects involving business model changes, challenge these assumptions and often are not able to deliver proof and metrics that are accepted by the current process. The next section of quotes is dealing with the perception of the interview participants, how they believe projects should be evaluated or how the current way of evaluation hinders progress with business model innovation projects.

" I think the evaluation of this ... is the ... Achilles heel. You get a lot of information but ... it's almost impossible to judge, is this really something or is it not." (Interviewee 10, 1:04:28)

The case company currently asks for large input of information on each of the BMI projects, without offering a structured way of evaluating the information, or which information to collect. Therefore, the projects do not seem to receive the evaluation they would require, as decision-makers pick the information they can make sense of the most, reducing the amount of information to reduce complexity of the project.

" Some gates ... it is good to have this kind of structure and structured questions. ... show me the business case ... we should have many of these layers at the same time, ... But then I will then also raise there may be a case where the, the it's not judged only by the pure direct impact but also considering the indirect things and then somehow trying to give them the value. Yeah, so this I would miss I'm not sure if it is there." (Interviewee 1, 28:11)

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" ... MVP then the final product ... MMP." (Interviewee 1, 55:48)

Employees suggest defining an evaluation structure, that would support BMI projects within the case company's structure. However, widening the scope of the criteria specifically for projects that attempt to create a different business model than the traditional. The quotes given above express the need to define layers, levels and stages for the evaluation that refer to definition of topic areas, layers, that need to be covered, levels that define the progress throughout the life-cycle of the project in each layer and control its progress in different stages of the development. The interviewee mentions MVP, MMP and the final product, suggesting that the development of the offering could be split into

stages, depending on the readiness of the offering. Furthermore, for structuring the layers of business model innovation projects, interviewees state that dimensions of these layers could be based on business model concepts, like the used “vision board” or “business model canvas”.

” Partly problematic put it out with a strict word, because you need to set limits down with the possibilities and the ideas. Someone who have a killer idea about something that is maybe a little bit out of scope for traditional ... but maybe it's the best idea to go after. ... with some kind of mini EBA ... Even these ideas could be put forward, but then other states ... this is ... out of scope.” (Interviewee 10, 35:33)

BMI projects do face some bias when it comes to evaluation in the given structure of an incumbent firm, the evaluation of strategical fit, puts BMI projects at a disadvantage. The interviewee above expresses, that projects are not only evaluated according to their potential but also how they fit in the overall strategy of the company. Whereas this factor should not be disregarded for deciding, still being important, there is no objective criteria available that quantifies this factor. Not being able to quantify “strategic fit” in the evaluation of BMI projects, leads to them being disregarded as viable options as the question of strategic fit becomes a yes or no answer, that either the project fits into the strategy of the company or not.

” I found R&D more toward mechanical solution or mechanical research, but my idea would be more involved, about digital solution, which I don't see them as a right division to assess my idea. ... I don't see any structure way how to propose it out there.” (Interviewee 2, 33:06)

There is no structure within the case company, specifically for BMI projects, the evaluation of such projects commonly falls to R&D departments, which according to the Interviewee above, is not the optimal choice. BMI projects often require a different knowledge background than what R&D departments are working with. R&D departments usually work with the capabilities of the current business model. Consequently, capabilities that BMI projects would require might not be available.

” Kill a project or kill initiative. It should be also explained to the people the right way ... in terms saying because of these and these things, we didn't proceed. So again, to get the black and white answer of yes or no. It's equally bad to say yes. ... What next? ... On which grounds? Where did we fail? ... What was the decision based on?” (Interviewee 10, 57:55)

Not only for the individual BMI project being cancelled, this disagreement over evaluation criteria, is problematic. Also, for projects being accepted by the organization the reasons behind the decision stay elusive. Further progressing with BMI projects, therefore exposes the project to deviate from the incumbent's expectations for the project. Additionally, cancelled projects do not provide information on the reason, why. Therefore, not offering feedback from that perspective as well.

" Something is expected to come. But then when it comes it's like, is this really it? ... what is the actual expectation of digital stuff, for example? What does it mean in the bigger context? That is, it like what is software or is it some kind of stuff that we integrate into hardware or?" (Interviewee 10, 32:52)

Referring to organizational expectations, the interviewee adds that, for developing a business model innovation project within the case company, seems to be subject of huge expectations that need to be fulfilled, however a definition of these expectations is not offered, leaving the developing team to make their own interpretation. This issue is subject to evaluation structure of a business model innovation project, as well as the strategic link of BMI alike, which will be discussed further in a different section of this thesis' result section.

In summary, the results from the case company indicate that a separate evaluation structure for business model innovation needs to be found, that incorporates more suitable evaluation criteria for such projects. Furthermore, these criteria need to in the best-case scenario objectively quantifiable, using direct and indirect impact factors. Third, the individuals in charge of evaluating business model innovation projects should be done by a separate structure within the incumbent company, to avoid bias, originating out of the traditional business model. Fourth and last implication from this section is the inclusion of a "strategic fit"-dimension into the analysis of business model innovation projects, quantifying how much a project can deviate from the existing logic and what potential it needs to show to justify this deviation. Establishing this connection, might help incumbent companies and their employees to justify business model innovation within their own structure.

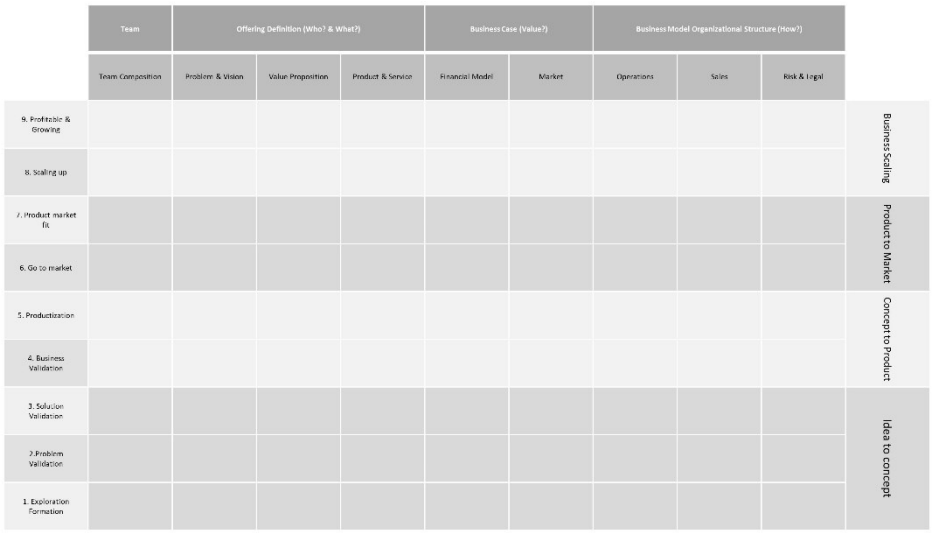

Figure 8 Evaluation Structure (Operational level)

The table in fig. 8 offers a suggestion of how an evaluation structure might be organized for an organization which attempts to incorporate a business model innovation process within their organization. The dimensions are deducted from business model theory, using the dimensions of ”Who?”, ”What?”, ”Value?” and ”How?”. Sub-dimensions to these questions have been added to specify how these questions could be answered within an incumbent firm. Furthermore the 9 stages used to show the progress of the business model project, are related to the different stages of the offering development, interviewees mentioned minimum viable product, minimum marketable product and the finished product as stages in the business model innovation process, leading this structure to use the ”Idea to concept”, ”concept to product”, ”product to market” and ”business scaling” to include such stages into each dimension.

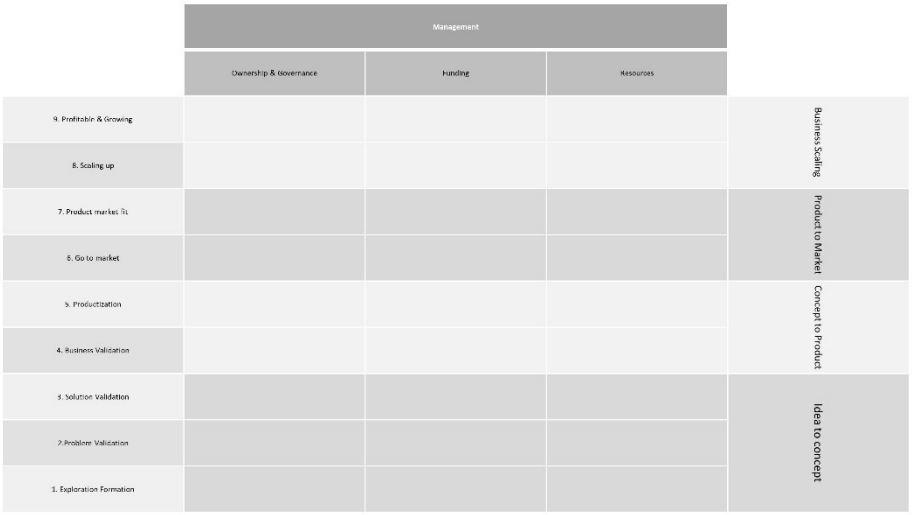

Figure 9 Evaluation Structure (strategic level)

To add the stages identified during the interviews, necessary to define points in time, when a business model innovation project should be evaluated for their continuation or cancellation, the evaluation structure is furthermore including a separate section for managerial actions throughout the process as can be seen from fig. 9. The figure specifies actions that should be taken, according to the development stage the project is currently in. This is especially important to agree on an organizational level what support each project will receive and when. It also allows an objective evaluation, based on criteria able to capture the complexity of a business model project, opposed to innovation projects in line with the business model currently applied in an incumbent firm.